

JPRS 70437

9 January 1978

TRANSLATIONS ON USSR MILITARY AFFAIRS

No. 1321

Reproduced From
Best Available Copy

DISTRIBUTION STATEMENT A

Approved for Public Release
Distribution Unlimited

U. S. JOINT PUBLICATIONS RESEARCH SERVICE

REPRODUCED BY
NATIONAL TECHNICAL
INFORMATION SERVICE
U. S. DEPARTMENT OF COMMERCE
SPRINGFIELD, VA. 22161

U S S R

20000202 143

NOTE

JPRS publications contain information primarily from foreign newspapers, periodicals and books, but also from news agency transmissions and broadcasts. Materials from foreign-language sources are translated; those from English-language sources are transcribed or reprinted, with the original phrasing and other characteristics retained.

Headlines, editorial reports, and material enclosed in brackets [] are supplied by JPRS. Processing indicators such as [Text] or [Excerpt] in the first line of each item, or following the last line of a brief, indicate how the original information was processed. Where no processing indicator is given, the information was summarized or extracted.

Unfamiliar names rendered phonetically or transliterated are enclosed in parentheses. Words or names preceded by a question mark and enclosed in parentheses were not clear in the original but have been supplied as appropriate in context. Other unattributed parenthetical notes within the body of an item originate with the source. Times within items are as given by source.

The contents of this publication in no way represent the policies, views or attitudes of the U.S. Government.

PROCUREMENT OF PUBLICATIONS

JPRS publications may be ordered from the National Technical Information Service (NTIS), Springfield, Virginia 22151. In ordering, it is recommended that the JPRS number, title, date and author, if applicable, of publication be cited.

Current JPRS publications are announced in Government Reports Announcements issued semimonthly by the NTIS, and are listed in the Monthly Catalog of U.S. Government Publications issued by the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402.

Indexes to this report (by keyword, author, personal names, title and series) are available through Bell & Howell, Old Mansfield Road, Wooster, Ohio, 44691.

Correspondence pertaining to matters other than procurement may be addressed to Joint Publications Research Service, 1000 North Glebe Road, Arlington, Virginia 22201.

Soviet journal articles displaying a copyright notice and included in this report are reproduced and sold by NTIS with permission of the copyright agency of the Soviet Union. Further reproduction of these copyrighted journal articles is prohibited without permission from the copyright agency of the Soviet Union.

BIBLIOGRAPHIC DATA SHEET	1. Report No. JPRS 70437	2.	3. Recipient's Accession No.
4. Title and Subtitle TRANSLATIONS ON USSR MILITARY AFFAIRS, No. 1321		5. Report Date 9 January 1978	
		6.	
7. Author(s)		8. Performing Organization Rept. No.	
9. Performing Organization Name and Address Joint Publications Research Service 1000 North Glebe Road Arlington, Virginia 22201		10. Project/Task/Work Unit No.	
		11. Contract/Grant No.	
12. Sponsoring Organization Name and Address As above		13. Type of Report & Period Covered	
		14.	
15. Supplementary Notes			
16. Abstracts The report contains information on the Soviet military and civil defense establishments, leadership, doctrine, policy, planning, political affairs, organization, and equipment.			
17. Key Words and Document Analysis. 17a. Descriptors USSR Military Organizations Military Facilities Military Personnel			
17b. Identifiers/Open-Ended Terms			
17c. COSATI Field/Group 15C			
18. Availability Statement Unlimited availability. Sold by NTIS, Springfield, Va. 22151		19. Security Class (This Report) UNCLASSIFIED	21. No. of Pages 89
		20. Security Class (This Page) UNCLASSIFIED	22. Price PCA05

9 January 1978

TRANSLATIONS ON USSR MILITARY AFFAIRS

No. 1321

CONTENTS

PAGE

Leningrad MD Commander on Combat Traditions and Training (M. Sorokin; KOMMUNIST VOORUZHENNYKH SIL, Oct 77)	1
Training Results in Strategic Missile Forces (A. Fedorov; KOMMUNIST VOORUZHENNYKH SIL, Oct 77)	12
Missile Troops and Artillery Day Report Material (KOMMUNIST VOORUZHENNYKH SIL, Oct 77)	21
Activities of Aviation Engineering Service Officer Described (O. Vinogradov; AVIATSIYA I KOSMONAVTIKA, Oct 77)	28
Activities in an Aviation Technical Maintenance Unit (V. Vysotskiy; AVIATSIYA I KOSMONAVTIKA, Oct 77)	33
Medical Officer Duties in a Training Air Regiment Described (I. Botov; AVIATSIYA I KOSMONAVTIKA, Oct 77)	36
Flight Control Officers: Good and Bad Examples Described (B. Mamayev; AVIATSIYA I KOSMONAVTIKA, Oct 77)	41
Pilot Error in Bombing Exercise Discussed (S. Tolstoy; AVIATSIYA I KOSMONAVTIKA, Oct 77)	47
Violations of Flight Regulations Discussed (I. Onishchenko; AVIATSIYA I KOSMONAVTIKA, Oct 77)	50
Flight Incidents Connected With Runway Surfaces Discussed (A. Zhuravlev; AVIATSIYA I KOSMONAVTIKA, Oct 77)	53
Comments on U.S. Cruise Missile Capabilities (AVIATSIYA I KOSMONAVTIKA, Oct 77)	57
Comments on NATO Employment of Helicopters Against Tanks (I. Chebotarev; AVIATSIYA I KOSMONAVTIKA, Oct 77)	59

CONTENTS (Continued)	Page
New Snow and Swamp-Going Vehicles Described (Rashko Todorov; SERZHANT, No 11, 1977)	63
Preparations for Armed Forces Anniversary Discussed (Editorial; KRASNAYA ZVEZDA, 8 Dec 77)	69
Review of Third Volume of Soviet Military Encyclopedia (N. Pankratov; KRASNAYA ZVEZDA, 8 Dec 77)	72
Army Paper Lauds Development of Socialist Community (Editorial: KRASNAYA ZVEZDA, 11 Dec 77)	77
Military District Newspapers Criticized on Subject of Vigilance (KRASNAYA ZVEZDA, 13 Dec 77)	80
Military Prosecutors Discuss Legal Education (G. Kryazhev; KRASNAYA ZVEZDA, 14 Dec 77)	82

LENINGRAD MD COMMANDER ON COMBAT TRADITIONS AND TRAINING

Moscow KOMMUNIST VOORUZHENNYKH SIL in Russian No 20, Oct 77
signed to press 11 Oct 77 pp 58-63

{Article by Col Gen M. Sorokin, Commander, Order of Lenin
Leningrad Military District: "Loyal to Traditions"}

{Text} The land of the soviets is greeting its 60-year jubilee with immense accomplishments in all sectors of communist construction. Closely united around our native party and its Central Committee, the heroic working class, the kolkhoz peasantry and the people's intelligentsia are taking up the foreign and domestic policy of the CPSU as their vital affair and they are firmly resolved to implement the majestic plans of the 25th CPSU Congress.

Along with the entire nation, Army and Navy personnel--including the soldiers of our district--are greeting the 60th anniversary of the Great October Socialist Revolution with worthy military deeds. While profoundly recognizing their constitutional duty, the armed defenders of the socialist homeland are devoting their strength, knowledge and energy to reliably defend the achievements of October and to worthily accomplish their responsible mission--to stand guard over the peaceful labor of the builders of communism and to be a bulwark for universal peace.

Our Order of Lenin Leningrad Military District is the oldest in the country. It has rich revolutionary and combat traditions which have their origin in the heroic events of the first Russian revolution of 1905-1907. The Bolshevik military cadres--which

subsequently were the nucleus of the armed forces for the October Revolution and then the nucleus of the first Red Army regiments-- were born and hardened in the combat detachments and volunteer squads of the Petrograd proletariat which were formed then for the struggle with tsarist autocracy.

Just two days after publication of the Decree on Creation of the WPRA {Workers' and Peasants' Red Army} --on 16 January 1918-- the procedure for forming the Red Army 1st Corps was established by order of the Petrograd Military District. The 1st and 2nd Red Army Regiments were formed from 110th Infantry Division and 3rd Siberian Rifle Division soldiers who voluntarily joined the ranks of the Red Army; these units, along with other units and detachments of the newly born army of the socialist state, blocked the path of the German forces' advance.

The enemy was strong and insidious. He had a large superiority in manpower and equipment; he possessed prolific experience in the conduct of war. In spite of this, the heroic Red regiments inflicted appreciable damage on the enemy during the first engagements. They displayed exceptional persistence and self-sacrifice in combatting the foreign invaders who had encroached upon the freedom and independence of the young Soviet Republic. Especially noticeable blows were inflicted on the German occupying armies at Pskov and Narva. The troops of the Petrograd Military District, together with other units, successfully defeated the foreign military interventionists and the internal counterrevolution.

The Soviet people and their armed defenders had to endure even more severe trials during the Great Patriotic War. This was the most just and most difficult war which our people ever had to fight. The Soviet Union and its Armed Forces gained a universally historical victory in the bloody clashes with the shock forces of international imperialism--fascist Germany and militarist Japan. The heroic defenders of the city of Leningrad and the valiant forces of the Leningrad Front made a worthy contribution to this victory. Appearing at a ceremonial meeting of representatives of party, Soviet and public organizations and units of the Leningrad Military District on the occasion of the presentation of a high award to the hero city of Leningrad,

Comrade L. I. Brezhnev said: "History knows many examples of the heroic defense of fortresses and cities...But, the legends of gray antiquity pale before the incomparable epic tale of the human courage, fortitude and selfless patriotism which formed the heroic 900-day defense of besieged Leningrad during the Great Patriotic War...The Leningraders' courage and the valor of the defenders of Lenin's city will be forever preserved in the grateful memory of present and future generations of Soviet people."

The Great Patriotic War convincingly demonstrated that there are no forces in the world which can stop socialism's progressive movement. It again confirmed the truth that a military expedition against the mighty Soviet State is fraught with the most disastrous consequences for any aggressor. Modern fanciers of military adventures--who dream of plunging mankind into a thermonuclear catastrophe--should not forget this.

The power of our Army--including the Leningrad District's forces--has now grown immeasurably. They are equipped with the latest equipment and weapons which have strengthened unit and subunit combat capabilities many times over and which enable them to accomplish missions which were beyond discussion in the recent past. The technological progress which was achieved under the leadership of our country's Communist Party during the 60 years of Soviet rule is displayed in this.

Along with the technical reequipping of the forces, significant qualitative changes have also taken place in Army and Navy personnel. Our commanders and political officers, as a rule, have a higher military education, are masters of progressive methods for personnel training and indoctrination and they are able to successfully lead units and subunits in all types of combat with consideration for the peculiarities of the theater of military operations and to accomplish the most complex missions under conditions of the employment of the latest means of combat. The general educational and cultural level of soldiers, sergeants and warrant officers has risen to new heights. The overwhelming majority of them have a secondary, secondary technical and higher educations which enable them to master the most complex equipment and weapons in the shortest

possible time and to fall into the formation of defenders of the Soviet homeland. All these accomplishments are the fruits of the Leninist cultural revolution and the Communist Party's indefatigable concern for the training of Soviet military personnel.

The changes which have taken place in our Army and in our district give rise to a feeling of pride and satisfaction. And, at the same time, they also give rise to large commitments. The scale and complexity of the tasks facing the district's troops demand the tense, creative labor of each commander, political officer and of each soldier. And, in this respect one cannot help but mention the mighty means which help us achieve a high level of quality and efficiency in military labor. I mean socialist competition. It became especially widespread during the jubilee year. The district's soldiers, like all Soviet Army personnel, amicably supported the initiative of the leading military collectives which took the lead in the competition among the Services of the Armed Forces in order to steadfastly implement the decisions of the 25th CPSU Congress, to improve combat and political training, to master modern weapons and new equipment and to vigilantly and reliably defend the peaceful labor of the Soviet people. The Red Banner, Order of Suvorov Fokshansko-Gdan'skiy Guards Tank Regiment which is commanded by Guards Maj A. Bogdanov was one of the first to take up the patriotic initiative of competition leader. Following this collective, subunits of motorized riflemen, missilemen, airmen, artillerymen, signalmen, combat engineers, motor transport drivers and other service arms marked high frontiers in the jubilee competition.

And it must be said that our commanders, political agencies and party organizations are approaching the organization and management of competition in a thoughtful manner and they are pressing for its maximum effect. In the same regiment which is commanded by Guards Maj A. Bogdanov--as, by the way, in the majority of the remaining military collectives--they comprehensively evaluated each serviceman's potential before the pledges were adopted. The pledges for the detachments, platoons, companies, battalions and regiment as a whole were made up from the individual pledges. The main efforts here were directed at mastering modern weapons and

new equipment, at skillful handling of combat vehicles and at expert marksmanship. Commanders use an individual approach in training their subordinates while conforming to the principle-- from the simple to the complex. At first, drills on the basics of firing and driving are mastered, then it's all brought together. The most important principles of competition are implemented in a businesslike manner: publicity, comparison of results and repetition of experiences. The effectiveness of competition is especially obvious in the battalion commanded by Guards Capt Yu. Tatarenkov and in the company headed by Guards Sr Lt R. Galiulov. The tankers' combat training level in these units has significantly increased.

An atmosphere for a creative approach to the accomplishment of the missions facing personnel was created in the regiment. The commander, staff, political officers and party and Komsomol organizations are constantly concerned about the quality of the training process, the effectiveness of socialist competition, improving facilities and efficient utilization of training time; they are striving to get the most from each lesson and each exercise.

Many subunit commanders and political officials have learned to organize and maintain highly intense competition during all lessons and field exercises and to efficiently evaluate its results. During each stage of tactical exercises, the actions of each soldier, detachment, team and crew are evaluated. Platoon leaders rate detachments, company commanders rate platoons, etc. Thus, there is an objective and instructive critique; the best are noted; and shortcomings uncovered during the exercises are analyzed and recommendations are made for eliminating them.

Take the Red Banner, Order of Kutuzov Leningrad Motorized Rifle Training Regiment imeni Leninskiy Komsomol. This famous unit is one of the oldest, not just in the district, but in the Armed Forces. The regiment was formed in the menacing year 1918 by one of the Civil War heroes, Ya. F. Fabritsius. The regiment was decorated with four Revolutionary Red Banners for its combat services during the first years of Soviet rule. During the Great Patriotic War, its Combat Banner was decorated with two orders and it became a guards regiment.

A struggle for outstanding accomplishment of each day's combat training mission has unfolded here and it is conducted in an objective manner. It is worth noting that the commander of the guards training regiment himself--and also the deputy commanders and staff officers--sets the tone in this important business. By considering the specific missions accomplished by the regiments, the commanders, political officers and party organizations are looking for new reserves to increase the effectiveness of competition. The regiment actively makes use of the potential of skilled Army people and innovators for improving the training process and improving training facilities. Everything new and progressive which springs up during competition receives widespread publicity.

A great deal of the credit for all this goes to the party organization headed by Maj. A. Lyashenko. The problems of improving the efficiency and quality of combat and political training are discussed regularly at party meetings and at party bureau meetings. It has become the practice to listen to reports from communists as to the contributions they are making toward fulfillment of socialist pledges and how they are improving their ideological level and technical and specialty knowledge. The communists devote special attention to training personnel for lessons, tactical exercises and combat firing and to rendering assistance to sergeants in acquiring knowledge and skills for training and indoctrinating personnel. Various forms of training are used for this purpose, such as, sergeants' lecture bureaus, exchanging experience, instructional methods lessons, demonstrations, etc. Their efficiency is proven in practice.

Concrete experience in organizing lessons on tactical, weapons and technical training has been accumulated in the district. For example, the training experiences of the outstanding gunners in the motorized rifle company commanded by communist V. Lotiyev received widespread publicity. Hero of the Soviet Union Guards Pvt Konstantin Shestakov has been permanently entered on the rolls of this subunit. Following the combat traditions of front-line soldiers, the motorized riflemen are striving to hit the target with the first shot, with the first burst at maximum range. The subunit's commander and party and Komsomol organizations are mobilizing the efforts of personnel

toward retaining the title of outstanding company in the jubilee year. They are devoting special attention to the young soldiers. Based on the initiative of the communists and with the commander's support, supplementary lessons are organized for them here; the experienced gunners are helping them. The lessons which are conducted on a regular basis in the weapons sport group and also the quizzes and contests for the title of best specialist and expert weapons mastery are beneficial.

Based on the initiative of this company's soldiers, the movement for best motorized rifle (tank) company in weapons training has become widespread. It has a beneficial effect on the weapons training level of motorized riflemen and tankers. A prize--a cube with the names of the Heroes of the Soviet Union, who are permanently entered on the rolls of the district's units and subunits, engraved on it--was established for the winner of this competition.

Commanders, political agencies and party organizations are devoting a great deal of attention to indoctrinating soldiers with a spirit of lofty ideological principles and morality, discipline and industriousness and a conscientious attitude toward fulfilling their military duty. This is furthered by an in-depth study of the documents of the 25th Congress and the May 1977 and October 1977 CPSU Central Committee plenums and of Central Committee decrees. Propaganda and mass agitation work became widespread in connection with the preparations for the 60th anniversary of Great October and the national discussion of the new draft USSR Constitution. The overall approach to ideological work--which guarantees the close-knit unity of ideological, political, labor and moral indoctrination of personnel with consideration for the different categories of servicemen and which was advanced by the 25th CPSU Congress and confirmed in practice--became an effective method for raising the quality of the measures conducted among the troops. We are eye witnesses to the fact that the level of the soldiers' ideological and theoretical strengthening is steadily growing as is their interest in independently studying Lenin's ideological inheritance and the urgent theoretical and policy problems of the CPSU. Theoretical, scientific-applied and methods conferences and discussions are systematically organized to help

them; lectures and reports are given on the current problems of personnel training and indoctrination.

There is a great deal of positive experience in the political indoctrination of soldiers and in the formation of a high level of moral and combat qualities in them in the outstanding unit where Lt Col V. Shakhov is the political officer. The missions set for the Soviet Armed Forces by the party and government and the requirements of the oath and military regulations are skillfully and clearly explained to personnel here. Communists and Komsomol members actively participate in this work. During field exercises and combat firing, they set an example of exemplary fulfillment of service duty; they skillfully solve combat training tasks; they break the norms; and they help commanders in the struggle against shortcomings in training and discipline.

The rich traditions of the district and Armed Forces are widely used in personnel training and indoctrination. It is impossible in one article to relate the multitude of heroic feats of the district's units and large units in battles for the homeland. We have subunits which were awarded special honorific titles for their special services on the fields of battle against the German fascist invaders. Among them is the Glory Battalion, all of whose sergeants and soldiers were awarded Orders of Glory in January 1945 for the courage and valor they displayed in the battles at the bridgehead south of Warsaw. There is a company in the district which is named the Order-Bearer. While fighting at the "Neva Circle" near Leningrad in the fall of 1945, all its personnel demonstrated unparalleled heroism, and were awarded orders.

The feat of the 6th Heroic Komsomol Battery--whose soldiers and commanders distinguished themselves while defending Murmansk from the enemy--lives in the national memory. The city's grateful residents erected a monument to the loyal sons of the socialist homeland. An eternal flame burns as the symbol of the valor and glory of the armed defenders of the Soviet Transpolar Region. The proletarian general M. V. Frunze is an honorary Red Army soldier of this battery. The personnel of this famed subunit are now befittingly standing combat watch on the homeland's northern frontiers.

About 2,000 monuments dedicated to heroes of the Civil and Patriotic Wars can be counted on the territory where the district's troops are garrisoned. The memory of many revolutionaries, soldiers of the Army and Navy and partisan men and women is immortalized in the names of cities, villages, streets and squares. In just the territory of the northwestern oblasts of the USSR, 85 populated points and over 500 city and village prospects, streets and squares bear their names.

These and many other cases are the richest material which is actively used by commanders, political officers and party and Komsomol activists for indoctrinating personnel. It must be said that the soldiers are also directly indoctrinated in combat traditions in the combat training process. We conduct field and tactical exercises, as a rule, on the terrain lines where fierce battles were conducted during the Civil and Great Patriotic Wars. Tales about those who demonstrated examples of courage, persistence and valor in the battles for the Soviet homeland's freedom and honor have a strong effect on people; they mobilize them to zealous performance of duty and to outstanding mastery of combat specialties. Each person clearly recognizes himself as the heir and perpetuator of the glorious traditions and he strives to function at peak efficiency during exercises and to earn a high rating for his military labor.

Troop personnel proudly serve in the Order of Lenin Leningrad Military District whose glorious combat past inspires them toward new accomplishments in military labor. The Leningrad soldiers see their duty as one of implementing the requirements of the 25th CPSU Congress--to improve the quality and efficiency of combat training in every way possible and to increase vigilance and combat readiness. Tactical exercises and combat firing were organized and conducted in a purposeful manner in the units. They all received a high rating. The battalion commanded by Sr Lt V. Danilov can be cited as an example. During the recent exercises which took place in a situation which optimally approximated combat, its soldiers exhibited high speeds in advancing over almost impassable terrain and they exhibited expert mastery of equipment and weapons. The battalion successfully accomplished all its missions and deservedly received an

outstanding rating. The majority of the subunits which took part in the exercise also functioned swiftly, aggressively and with initiative. I would also like to mention Sr. Lt V. Mulin's company. While operating in the advance party, it accomplished the mission in a clear cut, competent, efficient manner and successfully negotiated intense water obstacles.

We are evaluating the results achieved in combat and political training during the jubilee year from party positions and we are mobilizing the efforts of communists, Komsomol members and all soldiers in searching out reserves for further improvement in the troop combat training level and combat readiness. This is being discussed at meetings of the district's party activists, at unit commanders' and political officers' conferences, at party and Komsomol activists' seminars and at meetings of training experts; our Army press is writing about this. A lot is also being done to popularize progressive training and indoctrination experiences. For example, a thorough discussion--not so much about what has already been accomplished as about the unused reserves and shortcomings which are hindering work--took place at a district party activist meeting which discussed the tasks of communists in light of the CPSU Central Committee decree "On the 60th Anniversary of the Great October Socialist Revolution."

We understand--and the party urges us to do this--that we should not flatter ourselves with the successes achieved, but we should concentrate attention in the first place on unsolved problems. And we still have them. The struggle for training efficiency and quality has not become an everyday affair for the commanders, political officers and staffs in all military collectives. Exercises are not always conducted at the proper level in some subunits; the moral and indoctrination aspects of competition are not fully utilized. These and other shortcomings are in the field of view of commanders, political agencies and party organizations. Communists are making strict demands on those comrades who are working at half-speed and who are not presenting an example in training and work.

The District Military Council is intently following the state of affairs among the troops and it is rendering them practical assistance in solving combat and political training tasks, in

organizing and conducting tactical exercises and combat firing and in strengthening discipline and prescribed order. For example, at one of the Military Council's meetings, a useful exchange of opinions took place on increasing the commanders' and political officers' role in organizing socialist competition and on the work style of officers-leaders and staffs of subordinate subunits in the struggle for combat training quality and efficiency. The implementation of the decisions adopted at the meeting enabled the achievement of a noticeable improvement in the state of affairs in units and subunits.

The widespread national discussion of the new draft USSR Constitution and its adoption at the extraordinary session of the USSR Supreme Soviet evoked a lofty political and business-like enthusiasm which reigns in each military collective. The words written in article 31 of the new Constitution: "The USSR Armed Forces' duty to the people is to reliably defend the socialist homeland and to maintain constant combat readiness, guaranteeing an immediate rebuff to any aggressor," sank deeply into the hearts of the Leningrad soldiers, as of all Army and Navy personnel. An ardent desire to worthily fulfill this sacred duty to the homeland--this is what determines the life position of each of the district's soldiers.

COPYRIGHT: "Kommunist Vooruzhennykh Sil", 1977

9001

CSO: 1801

TRAINING RESULTS IN STRATEGIC MISSILE FORCES

Moscow KOMMUNIST VOORUZHENNYKH SIL in Russian No 20, Oct 77
signed to press 11 Oct 77 pp 68-72

{Article by Col A. Fedorov, inspector, Strategic Missile Forces
Political Directorate: "Always on Guard"}

{Text} On a memorable November day last year, the personnel of the missile unit which was commanded by Lt Col A. Kryzhko were the first in the Strategic Missile Forces to step forward with an appeal to develop socialist competition for implementation of the decisions of the 25th CPSU Congress and for a worthy welcome to the 60th anniversary of the Great October Socialist Revolution. In order to back up their words with deeds, the commander, the party and Komsomol organizations and all the soldiers conducted a steadfast struggle during the year for the indispensable seizure of the designated frontiers, for outstanding performance of each combat tour of duty and for high-quality accomplishment of all combat training missions.

Recently, the combat training results were evaluated. The strategic missilemen kept their word. The unit was declared outstanding for the sixth time in a row. Eighty percent of the subunits and 75 percent of the combat crews were outstanding. Military affairs experts increased by 33 percent and higher rated specialists by 60 percent. Combat readiness was raised to a new, higher level.

The path to success was not easy. The missilemen constantly acknowledged their responsibility to fulfill each point of the

socialist pledges; without sparing strength or energy, they worked to accomplish their assigned missions.

The foundation for accomplishing new successes in the jubilee year was laid in the collective earlier--during the course of the socialist competition in honor of the 25th CPSU Congress. The number of experts and qualified specialists increased in the unit then; the missilemen's morale, political, volitional and physical tempering became stronger. The amicable military collective was entered in the Strategic Missile Forces Military Council's Book of Honor for the successes achieved in combat and political training and the Komsomol organization was awarded a pennant and the Komsomol Central Committee's challenge Red Banner.

The results of the May 1977 Party Central Committee Plenum and the new draft USSR Constitution brought forth a large surge of creative energy from the missilemen during the summer training period. The national discussion of the draft Basic Law of our government of all the people inspired the soldiers to even more intense military labor and it prompted them to search out additional reserves for increasing combat readiness and for complete fulfillment of the adopted socialist pledges. All combat training missions were accomplished in the unit under the motto "An Outstanding Result for Each Training Day." This was realized in the practical actions of each soldier, sergeant, warrant officer and officer; the credit for this goes first of all to the subunit commanders, officers and all the unit's communists.

And now, while analyzing the sources of the missilemen's successes, you arrive at the firm conviction that a great deal depended first of all on the commander, on his level of professional training and his ability to rely on the party organization in personnel training and indoctrination.

Lt Col Kryzhko belongs to the generation of commanders who confidently accepted the combat baton of the veteran missilemen and who were able to enrich themselves with their experience and to reinforce their in-depth theoretical knowledge with firm, practical skills. This helped him master the difficult duties

of a commander and become a missile affairs expert relatively quickly. While training and indoctrinating subordinates, officer A. Kryzhko devoted a lot of attention to the organization of socialist competition which facilitates people's display of creative work and initiative, strengthens their will and character and develops and strengthens the ties of friendship and fellowship. A. Kryzhko and our other commanders see competition as the reliable path for the complete and qualitative accomplishment of all combat training missions, for improving combat expertise and for a further increase in crew and subunit combat readiness. In organizing socialist competition, they manage it in accordance with the instructions of the 25th Party Congress and the decree of the CPSU Central Committee, the USSR Council of Ministers, the Komsomol and Komsomol Central Committee "On the All-Union Socialist Competition for Increasing Production Efficiency and Work Quality and for Successful Accomplishment of the 10th Five-Year Plan's Targets" and also the CPSU Central Committee decree "On the 60th Anniversary of the Great October Socialist Revolution."

In accomplishing the tasks stemming from these most important documents, the commander, political officer, staff and all the units' officers established measures for further increases in vigilance and combat readiness, the quality and efficiency of combat and political training and strengthening military discipline, organization and internal order. The party organization--which is constantly concerned with ensuring that communists set a personal example in accomplishing party and service duties--stands out as the commander's active assistant and firm supporter in mobilizing personnel to vigilant performance of combat tours of duty.

When performing a combat duty tour, the communists see their primary responsibility as one of ensuring correct, clear-cut actions by personnel. They are conscientiously evaluating the state of affairs in subunits and, on a daily basis, they let the soldiers know who is in the competition vanguard and who is lagging behind. This develops a spirit of competition, creative initiative and people's actions. It is characteristic that each of the unit's communists now feels a responsibility not just for accomplishment of his personal socialist pledges

but also for the affairs of the entire military collective which is accomplishing a combat mission of special state importance. The tone in competition is set by CPSU members Ye. Navrotsky, A. Golovach, Ye. Belen'kiy and other officers with a great deal of service and practical experience--the military affairs experts.

They relentlessly combat the slightest displays of complacency and elements of conceit in the unit. Thus, in the beginning of the training year, the growing demands for organizing competition were not fully taken into account and elements of formalism were permitted in the subunit commanded by Capt V. Vegerzhinskiy. There were cases when a complex situation was not created during multi-theme and training exercises and slackness was permitted during fulfillment of combat training missions and norms. This worried the commander and party organization. The next inspection showed that training time and training equipment were used inefficiently at times in the subunit, deficiencies were permitted in organizing and managing competition and the proper exactingness was not shown toward those who were satisfied with outmoded knowledge.

A subunit party meeting was conducted, at which there was a conscientious conversation about being irreconcilable toward deficiencies in organizing training and competition. Measures were established for increasing the responsibility of communists in fulfilling adopted pledges. In his turn, the unit commander organized additional instructional methods lessons and demonstrations which were conducted by the best trained officers, communists A. Golovach, B. Martynenko, B. Sinitsin and Ye. Belen'kiy.

The party bureau rendered effective assistance to the subunit's Komsomol organization. At an open Komsomol meeting, the young people then decided to develop competition under the motto "Outstanding Performance of Combat Duty Tours Every Day." The commanders and all the communists approved and supported its initiative. A great deal that was new and positive appeared in the course of this movement. For example, publicity, comparability of results achieved and the study and dissemination of advanced experience were improved. A greater concern for helping the laggards began to be shown. Evenings on technical subjects,

quizzes and discussions began to be held more frequently, based on the initiative of the Komsomol bureau which is headed by Sgt V. Yakovlev. Komsomol members took an active part in the creation of diagrams, posters, working mock-ups, electric stands and simulators. Activists Sr Sgt A. Kharitonov and Pvts S. Vinogradov, B. Danilin and V. Kondrat'yev especially distinguished themselves in this area.

Through several weeks of intense labor, the deficiencies in the subunit were eliminated. On the eve of the 60th anniversary of Great October, the missilemen are reporting to the homeland: the high socialist pledges were fulfilled; the subunit was outstanding.

An analysis of achievements in the jubilee year tells first of all about the officers' increased initiative in the study of combat equipment and in increasing skill ratings. Now every third person among them is a combat qualified expert. At present, the majority of officers standing duty tours in combat crews are military affairs experts.

Capt M. Popov--a combat qualified expert and the best specialist--enjoys a great deal of prestige in the unit. He is a skilled organizer, a thoughtful teacher and a tireless searcher for the most effective methods of training missilemen and organizing competition. During the past training year, this subunit's officer collective received replacements from the institute graduates. It was important not to allow a decrease in combat readiness and to facilitate the lieutenants' quick introduction into formation. Capt M. Popov together with the party organization secretary, officer V. Bezrukov, thoughtfully approached the solution of these problems. Concrete, individual goals were established for each young officer. Besides the planned lessons, the commander organized supplementary ones which made it possible for the missilemen to master their functional responsibilities better.

Previously, they did not always give specific help to people who were preparing for the qualifying tests and sometimes havoc was permitted. The commander decided to prepare his subordinates for the tests in stages in order to prevent a repetition of these

deficiencies. This enabled an increased organization of studies, a deeper mastery of equipment and the acquisition of a specialist rating in a timely manner.

Relying on the communists, Capt M. Popov steadfastly struggled for a high qualitative mastery of the tasks and norms while conscientiously rating his subordinates' training in a party manner. A great deal was also done so that each multi-theme exercise was a tense training exercise for all the missilemen.

All of this enabled them to achieve complete fulfillment of their socialist pledges and to guarantee a high level of technical and specialized training. At present, 60 percent of this outstanding subunit's personnel are specialists with higher skill ratings.

Socialist competition has a vital, creative nature here and it serves not only the cause of training missilemen but also their indoctrination. It teaches people strict compliance to the unity of words and deeds and it develops collectivism and comradely mutual assistance. For example, the subunits commanded by officers V. Mikhaylov and V. Ostapenko are competing with each other. They are not hiding their secrets. To the contrary, as an experienced commander and a missile affairs expert, Capt V. Mikhaylov rendered a great deal of assistance to young officer V. Ostapenko in organizing competition and in training specialists for the higher skill ratings. A great deal of the credit goes to V. Mikhaylov and his subordinates, officers N. Ul'yanov and V. Bol'shakov for the fact that the subunit commanded by Sr Lt V. Ostapenko won the title of outstanding for the first time.

The unit commanders and party organization are concerned about improving the management of competition and about its effectiveness. Special attention is devoted to completely utilizing its potential as a mighty means for raising the soldiers' creative activity, for their moral improvement, for the unity of military collectives, for strengthening discipline and for strictly maintaining prescribed order.

The experience accumulated in the unit shows that the indoctrination functions of competition are significantly reinforced if the pledges are of a concrete, comprehensive nature, that is, they provide for improving the competitors' social activity not just in military work, but also in other areas--public, political, cultural and manners and morals. Now, when rating subordinates' actions, commanders and political officers are not just talking about grades and seconds. Naturally, as before, these statistics play an important part. But, at the same time, conclusions are being made about each soldier's activity and about his relationship to the collective. Did he have any reprimands, how did he behave during exercises and in the barracks, what did he do to specifically strengthen friendship and fellowship--everything is weighed.

The preparation for the 60th anniversary of Great October significantly enriched the missilemen's spiritual life and it reinforced the desire of each officer, warrant officer, sergeant and soldier to improve his ideological and theoretical level. For example, all the officers are fulfilling pledges on an in-depth study and popularization of Marxist-Leninist theory and on developing lectures, reports and papers on the issues of political and military indoctrination, party construction and training methods. As a rule, the experienced officers V. Kotovich, B. Sinitsin, A. Orlov, V. Bezrukov, V. Ostapenko and others give lectures and reports to personnel. They clearly explain the current issues in Marxist-Leninist theory and in the domestic and foreign policy of the Communist Party and the Soviet State and the tasks stemming from the requirements of the USSR Ministry of Defense and the chief of the Main Political Directorate of the Soviet Army and Navy on increasing vigilance and combat readiness in every way possible and improving the expertise of soldier-missilemen.

Of the measures dedicated to the 60th anniversary of Great October, the heart-to-heart talks with veterans of the Great Patriotic War and meetings with old communists and Heroes of the Soviet Union and with leaders of industrial production and agriculture left a noticeable mark on the soldiers' consciousness. The thematic evening "We Have Something and Somebody to Defend,"

the Leninist lesson "I am a Citizen of the Soviet Union" and the meetings with Heroes of the Soviet Union, party veterans and other of the country's famous people--these especially stuck in the memories of the missilemen.

A great deal of work is being conducted in the unit in connection with the new USSR Constitution. The soldiers fervently approve of the Basic Law of our government of all the people and they are discussing with a great deal of interest their tasks which stem from the report of the general secretary of the CPSU Central Committee, the chairman of the USSR Supreme Soviet Presidium and the chairman of the Constitutional Commission at the extraordinary session of the USSR Supreme Soviet on 4 October 1977. Political information sessions and discussions are being conducted in all subunits and reports are being given; these are mobilizing personnel to an in-depth study of the USSR Constitution, to a further increase in vigilance and combat readiness, to a strengthening of military discipline and for a worthy welcome to the 60th anniversary of Great October.

The party organization's serious attention is also riveted to the recently published decree of the Party Central Committee "On the Orskiy CPSU Gorkom's Implementation of a Comprehensive Solution to the Problems of Ideological and Indoctrination Work." The CPSU Central Committee's conclusions and instructions were thoroughly discussed in all the subunits; concrete measures were established for a further extension of the comprehensive approach to accomplishing ideological and indoctrination tasks and for more widespread utilization of the mobilizing potential of socialist competition for increasing vigilance, for increasing the readiness of personnel to accomplish combat missions under any conditions in a particular situation, for improving their political and military training and for forming an active life position and a high level of moral and combat qualities in them.

The commander, his deputy for political affairs and the staff are striving to strictly fulfill the Leninist instructions on organizing socialist competition. Bulletins--which point out who distinguished themselves and how--are hung up in the subunits at the end of each training day. The competition winners are mentioned at discussions, information sessions and political

lessons; radio newspapers, photobulletins, special leaflets and combat leaflets are devoted to them. Based on the commander's decision, the challenge pennants "Best Subunit" and "Best Specialist" were presented. The commanders and all the communists of the subunits are making a great effort so that each incentive award for qualitative fulfillment of pledges becomes a significant event not just in the life of the person who distinguishes himself, but also in the life of the entire collective.

The training year is coming to an end. It gave a lot to the initiators of socialist competition in the Strategic Missile Forces. And I want to believe that the successes in combat improvement which were earned by intense military labor will not only be strengthened but will be multiplied. The interests of strengthening the defense capability of our socialist homeland demand this.

COPYRIGHT: "Kommunist Vooruzhennykh Sil", 1977

9001
CS0:1801

MISSILE TROOPS AND ARTILLERY DAY REPORT MATERIAL

Moscow KOMMUNIST VOORUZHENNYKH SIL in Russian No 20, Oct 77
signed to press 11 Oct 77 pp 77-81

[Article: "The Homeland's Missile Shield: Material for Reports and Discussions on Missile Troops and Artillery Day"]

[Excerpts] The source of this glorious holiday goes back to a most important event in the Great Patriotic War--the heroic battle on the Volga. Thirty-five years ago--early in the morning on 19 November 1942--salvoes from many thousands of guns, mortars and rocket launchers proclaimed to the world the beginning of the Soviet Army's mighty counteroffensive at the walls of heroic Stalingrad. The victory at Stalingrad made an enormous contribution to the achievement of the radical turning point in the course of the Great Patriotic War and it had a definite effect on the subsequent events of the Second World War as a whole.

In commemoration of Soviet artillery's combat services in the struggle with the enemy, the annual celebration of Artillery Day was established by the 21 October 1944 Ukase of the Presidium of the USSR Supreme Soviet.

In connection with the radical transformation in military affairs, the appearance of nuclear missiles and the creation of a new Service in the Armed Forces--the Strategic Missile Forces--this holiday is now observed as Missile Forces and Artillery Day in accordance with the 17 November 1964 Ukase of the Presidium of the USSR Supreme Soviet. At the same time, our country and all the Soviet people are celebrating both the brilliant feats of the front-line soldiers and of the worthy heirs of their combat fame; they are paying their respects to the outstanding Soviet scientists and designers, engineers and technicians and defense industry workers--the creators of the mighty missile and artillery weapons.

This year the traditional holiday for missilemen and artillerymen is being observed amidst the Soviet people's exceptional patriotic enthusiasm which was evoked by the preparations for the 60th anniversary of the Great October Socialist Revolution. The enormous political and labor activity of the masses--which is growing with each day--was promoted by the national discussion of the new draft USSR Constitution and by the adoption of the Basic Law--the true manifesto for our lives--at the extraordinary seventh session of the USSR Supreme Soviet.

As was stated in Comrade L. I. Brezhnev's report at the 4 October 1977 session, "this is the Basic Law which we were waiting for. It correctly reflects our accomplishments, our aspirations and hopes; it correctly defines our rights and duties. While consolidating what has been achieved, it reveals the prospects for the future development of communist construction."

Our homeland has also achieved impressive successes in the international arena. The Soviet people ardently approve and support their native Communist Party's peaceful foreign policy which is aimed at decreasing international tension and eliminating the danger of a new war. At the same time, the party takes into account the fact that the current stage of world development is characterized by the intensification of the class struggle in the international arena. The influential forces of detente's enemies--who truly do not want to renounce the "cold war" and who are whipping up the arms race and organizing ideological diversions and slanderous anti-Soviet and anti-communist campaigns against the USSR and other socialist countries--are still operating in the world. The United States has undertaken a new, impetuous spiral in the arms race by creating the neutron bomb, cruise missiles and other lethal types of weapons and weapons systems.

"Under these conditions," emphasized D. F. Ustinov, USSR minister of defense and marshal of the Soviet Union, at the Kremlin reception in honor of military academy graduates in June 1977, "the CPSU combined with the parties of the fraternal socialist countries--while conducting a consistent struggle for peace--will tirelessly see to it that our borders are always defended."

The USSR Armed Forces' duty to the people--as written in the new Soviet Constitution--is to reliably defend the socialist homeland and to maintain constant combat readiness, guaranteeing the immediate defeat of any aggressor. The missilemen and artillerymen are making a worthy contribution to the accomplishment of this historic mission.

Led by the Communist Party, the Soviet people and their Armed Forces won an historic victory in the Great Patriotic War. This victory strengthened the USSR's international position and opened new, favorable possibilities for the growth of the forces of socialism, national liberation and democracy throughout the world.

However, the forces of reaction did not resign themselves to these radical changes in the international arena in favor of socialism. Relying on the U.S. atomic monopoly in the postwar period, aggressive circles in the imperialist states started the "cold war" against the Soviet Union and other peace-loving countries; they openly turned to a policy of intimidation as a means for achieving world domination.

In the situation which was created, the Communist Party and the Soviet government took effective measures for improving the homeland's combat might.

The remarkable achievements of the homeland's science and technology, the growing potential of the socialist economy and the Soviet people's selfless labor enabled the solution--in the shortest possible time--of the complex problem of creating our own nuclear weapons and a reliable means for delivering them on target--missiles.

The production of this weapon had already ceased being a secret for our country in 1947. The successful launch of the first ballistic missile took place then. The year 1957 was a very important milestone in the development of missile construction; the USSR successfully tested an intercontinental, multi-stage ballistic missile which was able to deliver nuclear weapons to any point on the globe.

The creation of nuclear missiles--which immeasurably multiplied the defensive might of our government and the countries of the socialist commonwealth--was combined with radical changes in the organizational structure and the entire vital activity of the forces. The most vivid expression of the profound qualitative changes in military affairs was the creation of the Strategic Missile Forces--based on the decision of the CPSU Central Committee and the Soviet government--which are an important component of the Soviet Armed Forces. These forces now have at their disposal powerful missiles and missile complexes which are capable of quickly and reliably delivering high-yield nuclear warheads to a target and they are capable of inflicting inescapable strikes on an aggressor no matter where he is located.

Day and night, winter and summer, in the heat and bad weather, the strategic missilemen vigilantly guard peace and socialism. They are in constant combat readiness and in peacetime they accomplish a mission of state importance; they are continually performing combat duty tours which demand from the soldiers maximum vigilance, superior moral, political and psychological qualities and a high level of combat and technical training.

The enormous combat capabilities of the missile forces and their role in modern warfare does not in any way detract from the importance of the other Services of the Armed Forces. Soviet military theory and practice proceeds from the fact that victory in modern warfare--if it is unleashed by the imperialists--can only be achieved by the combined efforts of all the Armed Forces' Services and service branches. Therefore the other means for conducting war--including conventional and rocket artillery--are constantly being improved and developed. A powerful weapon for combatting tanks--the ATGM (anti-tank guided missile)--has appeared; it is capable of destroying a tank at a great distance with the first shot.

Other Services of the Armed Forces are also equipped with nuclear missiles.

Our people are justifiably proud that the technical equipment and armament of our Army and Navy meet modern requirements. However, the glorious Soviet soldiers--who are wholeheartedly devoted to the party and people and who possess a firm tempering and superior moral, political and combat qualities--are the decisive factor in their unsurpassed combat power. They are worthily continuing the combat traditions of the older generations who, with weapons in hand, defended the great accomplishments of October. Suffice it to say that over 60 percent of the officers in the missile forces have an engineering background and over 90 percent of them are rated specialists, true missile affairs experts.

The sergeants and privates have qualitatively changed. Over 70 percent of the young soldiers arrive for duty with higher and secondary educations; this enables them to master the complex combat equipment in a shorter period of time and to function in a skillful manner during exercises and training launches.

The soldier-missilemen and artillerymen are celebrating their traditional holiday by successfully completing the training year and by achieving new combat readiness frontiers in the competition in honor of the Great October Jubilee. The soldiers demonstrated a high level of combat training, increased

military expertise and outstanding combat qualities during the missile training launches and artillery firing which took place. The majority of them were accomplished with a rating of "outstanding."

An example of persistent improvement in combat expertise is shown by the initiators of socialist competition for a worthy welcome to the 60th anniversary of Great October--the personnel of the unit which was commanded by LtCol A. Kryzhko. While actively striving for a further increase in combat readiness, an improvement in the quality of combat training and the persistent mastery of new equipment, the missileman collective completely fulfilled their adopted socialist pledges and were awarded the title of outstanding for the sixth time in a row. (The accomplishments of the competition initiators are related in LtCol A. Fedorov's material in this issue "Always on Guard.")

Valuable patriotic undertakings were developed further during the jubilee competition in the missile forces. For example, the military collectives' movement to achieve higher statistics in work on combat equipment became widespread; the widely disseminated mottoes attest to this: "Missile Affairs Experts for Each Combat Crew," "Outstanding Periodic Equipment Maintenance," "Model Training Facilities for Each Subunit," and others.

As always, the communists and Komsomol members are in the lead. Their creative work, enthusiasm and initiative are the reliable guarantee of the soldiers' fulfillment of their adopted socialist pledges. At present, over 60 percent of the communists are combat and political training experts; over 80 percent of them are missile affairs experts and highly-rated specialists.

Unit and subunit Komsomol organizations are successfully concluding a movement under the motto: A Worthy Welcome for the Great October Jubilee. Many Komsomol members earned the right to sign the Leninist Komsomol Report to the CPSU Central Committee.

Commanders, political agencies and party organizations are striving to consolidate the successes achieved; they are mobilizing the soldiers' energy to further the development of socialist competition. While evaluating the results of the fulfilled jubilee pledges, the Komsomol organization--where R. Gabdelkhakov is the Komsomol bureau secretary--stepped forward with a new initiative--to conduct a Komsomol-young people's contest "Military Valor" in honor of the 60th anniversary of the Soviet Armed Forces; its main purpose is for

each soldier to deeply study and to increase the Army and Navy's glorious combat traditions. This initiative was supported by many of the forces' Komsomol organizations.

The missilemen and artillerymen of the other Services of the Armed Forces are welcoming the 60th anniversary of Great October with new accomplishments in combat and political training. Thus, dozens of missile and artillery units and subunits in the Ground Forces attained the lofty title of outstanding. The artillery regiment commanded by officer I. Prostakov has earned the title of outstanding for a number of years. The soldiers of the units in which officers Yu. Kiselev and V. Kon'shin are serving--and of many others--celebrated the jubilee year with the same high training marks. The commanders, political officers and party and Komsomol organizations of these leading collectives are striving to use each day and hour of training time in the interests of further increasing combat expertise, strengthening discipline and increasing combat readiness.

Active ideological and indoctrination work--for inculcating personnel with communist conviction and wholehearted devotion to the party and socialist homeland and for developing in them a clear-cut class position, political vigilance, hatred for socialism's enemies and a readiness to selflessly defend Great October's accomplishments--is being conducted in missile and artillery units and throughout the Armed Forces.

Attention to ensuring the inherent unity of ideological, political, labor and moral work has increased in the practical activities of commanders, political officers and party organizations; the directions of the 25th CPSU Congress and the requirements of the CPSU Central Committee decree "On the Orskiy CPSU Gorkom's Implementation of a Comprehensive Solution to the Problems of Ideological and Indoctrination Work" are being consistently implemented. It has become the norm for the command-political leadership personnel and technical-engineering personnel to take an active part in ideological and indoctrination measures.

It is characteristic that lately the effectiveness of ideological and indoctrination work--directly with personnel in the subunits and crews which are performing combat duty tours--has increased in units and subunits. This permits the more efficient inculcation in each soldier of a personal responsibility for a high level of combat readiness in the Armed Forces.

While welcoming their traditional holiday, the soldiers of the missile forces and artillery are assuring their native Communist Party that they will continue to be worthy of its people's heroic accomplishments and of the lofty title of armed defenders of Great October's historic achievements. True to their duty, the missilemen and artillerymen are doing everything necessary to further increase combat readiness and vigilance and to improve combat expertise. As are all soldiers of the USSR Armed Forces, they are ready at a moment's notice to deal a shattering defeat to any aggressor who dares to violate the peaceful labor of the Soviet people--the builders of communism.

COPYRIGHT: "Kommunist Vooruzhennykh Sil", 1977

9001

CSO: 1801

ACTIVITIES OF AVIATION ENGINEERING SERVICE OFFICER DESCRIBED

Moscow AVIATSIYA I KOSMONAVTIKA in Russian No 10, Oct 77
signed to press 30 Aug 77 pp 34-35

/Article by Engr-Col O. Vinogradov: "The Engineer's High Standards"

/Text/ The training year is drawing to a close. It was conducted during a period of important political events in our country's life: the preparations for the 60th anniversary of Great October and the national discussion of the new draft USSR Constitution. While unanimously approving the draft Basic Law and expressing their full support for the decrees of the May 1977 CPSU Central Committee Plenum and the propositions and conclusions of the report by comrade L. I. Brezhnev, general secretary of the Central Committee, at the Plenum, the soldier-airmen are implementing the decisions of the 25th Party Congress on strengthening the Soviet Union's defense capability with an even greater sense of responsibility; they are mastering new frontiers in increasing combat readiness.

The soldiers of the aviation engineering branch headed by the experienced officer I. Nefedov also achieved a lot during the past year. With all their might, his subordinates are ensuring the quality accomplishment of the flight branch's combat training plans.

Success in any field does not come by itself. It is the result of the persistent, everyday labor of all the aircraft specialists. But, a great deal depends on how the unit deputy commander for aviation engineering services (AES) organizes aircraft equipment maintenance and the work of branch personnel--in complete compliance with the requirements of basic documents, orders and directives from senior chiefs.

Just as in the other units, the plans developed by officer Nefedov encompass all aspects of AES activity. Planning itself

is just an estimate of what measures are to be realized and when. The main thing, according to communist Nefedov, is the prompt accomplishment of the plan. And this is absolutely correct. It is not enough to formulate and assign a task. It is a lot more important to ensure its precise and timely accomplishment and to unfailingly monitor its quality.

Officer Nefedov's expectations are displayed in large and small matters. While discussing this businesslike quality--which is very valuable to the modern aircraft engineer--we would like to emphasize that some comrades understand by this simply the chief's ability to point out deficiencies and to hold subordinates strictly accountable. We think this point of view is not entirely true. Of course, the chief must be demanding and he must use the rights granted him by regulations. But, in our opinion, the most important criteria for his expectations are: the ability to always follow today's standards everywhere, the scientific organization of labor and the provisions of governing documents, and a desire to learn and to teach others, to help the soldier-airmen and to monitor the results of their labor.

The deputy commander for AES has a lot of responsibilities. And, they are all very important. But, officer Nefedov never forgets so vital a matter as flight crew technical engineering training. It is conducted on a systematic and purposeful basis in the unit.

It is a well-known fact that without an in-depth knowledge of aircraft equipment and the rules for its use, you cannot fully utilize the combat capabilities of modern aircraft in flight nor can you guarantee its error-free operation and the safe accomplishment of the flying mission. This is clear to both the novice and the air warrior who is wisened by experience. But, what can be done so that everyone--from the young aircraft commander to the unit commander--systematically enlarges this knowledge? After all, what is new to the beginning air warrior cannot now serve as the stimulus for arousing an interest in training for the pilot who has spent many hundreds of hours in the air. It's clear that a discriminating approach is needed here.

Together with his subordinate engineers, officer Nefedov developed a syllabus for individual lessons to guide the flight crew. The commander established the time periods for their accomplishment. Without thinking about the loss of their personal time, the appropriate specialists are organizing tutorials on the most difficult problems. And, no matter how

high the intensity of flight operations, Nefedov unfailingly conducts a thorough check on the material's mastery at the designated time.

One of the most important aspects of officer Nefedov's work is the indoctrination and training of the technical engineering crew. He believes that it is not enough for the airmen to be obedient operators (although this is also important in its own right); they should be convinced of the need to accomplish the tasks they receive in only a superior manner. The deputy commander for AES tries to achieve the situation where precision in observing the technical sequence of operations and meticulousness during aircraft equipment checks and inspections are ingrained in all his subordinates.

Many people in the unit remember this incident. A unit was installed in the aircraft guidance system which, under certain conditions, sometimes hindered the energetic movement of the stick back and forth. The pilots pointed out the delay in longitudinal control under several flight conditions. To check the unit on a stand, it was necessary to remove it from the aircraft. It's understandable that interference in the assembly of this system was not desirable. The question arose: how can you be sure the unit is working properly during the pre-flight check without dismantling it? Officer Nefedov's in-depth knowledge of the equipment and the experience of the unit's technical crew collective enabled them to find a simple but reliable solution. It was suggested that they find out if there was any rubbing in the deflection limiter for the spring loader when trimming the longitudinal control channel. There were no more cases of in-flight delays.

Officer Nefedov mastered the design and operation of aircraft equipment systems to the smallest detail. He also gets this from the engineers in their specialties. Together with them, he is improving inspection techniques and training methods for technical crew training; he is striving to put his subordinates on their guard against mistakes in every way possible.

Somehow during an aircraft inspection, a fuel leak was discovered in a tank which was in an almost inaccessible spot. A group of specialists headed by Technical Branch SrLt V. Anan'yev was instructed to change the tank. Considering the mounting features of the tank in the spare parts kit, the engineer warned Anan'yev that it would be necessary to put compensating washers under the heads of the bolts on the side of the aircraft. However, the washers were not installed. And the tank which was installed leaked during the refueling test.

Naturally, Technical Branch SrLt Anan'yev was held strictly responsible for the omission. At the critique where this case was analyzed, it was emphasized that it became possible due to the officer's low expectations, first of all of himself. But, they did not limit themselves to this; they planned measures for preventing similar mistakes.

Now--in spite of the large workload--the unit's specialist engineers and the subunits' engineers consider it necessary to make time for a joint discussion of techniques for different operations and inspections. This is all the more important now that the equipment of different aircraft systems--although not functionally related--is often located in the same bays. When everybody tells and shows the specialist how to function correctly, how to evaluate the technical status of the equipment being checked and, at the same time, how not to cause problems for another person's operation, then you can be sure that the mission will be accomplished in a superior manner. Besides, if an airman is still negligent, then you can hold him responsible for a procedural violation in a more objective and conscientious manner and the educational significance of this example will be more impressive and understandable to the collective.

Officer Nefedov sees the incomplete knowledge of isolated specialists, their poor knowledge of unit or system designs and operating principles, and their slipshod conception of some of the maintenance rules as the main causes of errors in maintaining aircraft equipment.

The deputy commander for AES is always in sight of his subordinates. And how important discipline, high expectations and fairness are in his actions. Communist Nefedov believes that you must be strictly guided by this, both in service matters and in your free time. Then work output will meet requirements.

It is very difficult to eliminate deficiencies with any other formulation of the problem. After all, there are still cases: at first glance, the work of the aviation engineering branch seems orderly. However, if you look a little deeper, another picture emerges. While the operator is within sight of his superior, everything is okay. But, the superior has only to turn his back, as they say, and you can expect problems.

It took a lot of work over a fairly long period of time to instill a sense of personal responsibility, industriousness and discipline in the aircraft specialists and to create a true atmosphere of high expectations in the collective. Of course, this work would have been impossible for one person--even such

an experienced and demanding a teacher as communist Nefedov. The political officers and party and Komsomol organizations and activists helped the command group. Many measures were undertaken. Individual conversations with the young specialists turned out to be especially effective. Socialist competition also played an important role: each time results were evaluated, not just the pure production figures of the AES subunits were taken into account, but also each soldier's external appearance and bearing and the state of discipline and order in the combat collectives.

Strict demands are made on violators of procedural discipline. Their level of professional training is vigilantly monitored. As a rule, specialists demonstrated sufficient theoretical knowledge on the tests. The mistakes made at work frequently show their poor practical training. Therefore, they had to look for new forms of inculcating firm skills in the technicians and mechanics. Supplementary practical lessons are planned for the subunit specialists in the TMU /technical maintenance unit/, theoretical material is selected, etc. After the lessons and training on the equipment, a test is given to the soldier-airmen who made mistakes in their work. Work efficiency and quality has improved as a result of this purposeful activity. The officers who worked under engineer Nefedov's leadership gratefully recall their teacher's high expectations and conscientiousness.

The aviation engineering branch headed by the excellent communist I. Nefedov is successfully concluding the training year. The officers, warrant officers, sergeants and soldiers are preparing a welcome worthy of the 60th anniversary of Great October.

COPYRIGHT: "Aviatsiya i kosmonavtika", 1977

9001

CSO: 1801

ACTIVITIES IN AN AVIATION TECHNICAL MAINTENANCE UNIT

Moscow AVIATSIYA I KOSMONAVTIKA in Russian No 10, Oct 77
signed to press 30 Aug 77 pp 36-37

[Article by Guards Engr-Maj V. Vysotskiy: "When Time Is Short: A Reader Continues the Discussion on the Topic: 'How Does the Flight Technician Learn?'"]

[Text] The discussion which was started in the pages of this magazine aroused the interest of the technical maintenance unit detachment chiefs. And this is understandable: a great deal of what Engr-LtCol M. Kashirskikh wrote has a direct bearing on the first-line organizers of aviation engineering support and servicing of modern missile-carrying aircraft.

It is hard to make a complete list of the work performed by this category of officers. Performing concrete measures on servicing days, organizing aircraft preventive maintenance inspections and studying documents--success in work is unthinkable without a knowledge of them--all of this bears on our work. And, indoctrinating and training subordinates?

A lot of time is spent on various critiques and filling out documents and requests. The specialist is frequently invited to meetings and assemblies and sometimes he is enlisted to perform work which is not related to aircraft equipment maintenance. In a word, just make the time!

What did the technical crew chiefs say while discussing the article? First of all, how can the labor efficiency of the TMU detachment chief be increased; what needs to be done for this? After all, he is not just responsible for his aircraft, but also for the aircraft of the entire detachment. At times--due to limited time or for other reasons--it is not possible for him to thoroughly examine the work of other technical crews, to look into some sort of problem and objectively evaluate the quality of each specialist's work and to organize control

over the flight preparation of missile-carrying aircraft. All of this is worth thinking about.

The TMU detachment chief has to constantly increase his knowledge. Otherwise it is impossible to competently service a complex aircraft system today and to efficiently train and indoctrinate subordinates who have a pretty high level of intellectual development. He who works on the equipment cannot rely on knowledge acquired earlier; he must expand it on a daily basis in the interests of the common cause--improving the quality of flight preparation of missile-carrying aircraft.

Under modern conditions, the TMU detachment chief's role has increased: in training and indoctrinating technical crew personnel and in preparing aircraft status and preventive maintenance forecasts. This means that the training of this category of officers must also be organized in a discriminating manner; each hour of training time must be zealously utilized and the most experienced engineers-methodologists must be drawn upon to conduct lessons.

It goes without saying that it is not easy to do this. The serious organizational work of the commander, his deputy for AES [aviation engineering services] and the staff officers is needed here. In my opinion, there is a wide field of activity for party and Komsomol organizations here. There must be a comprehensive approach to such an important matter.

As in other combat collectives, we have assemblies for the TMU detachment chiefs on a regular basis. When both the chiefs and the participants themselves approach the assemblies with a very responsible attitude, then they are undoubtedly useful. But, unfortunately, their quality is not always of equal value. Lectures are mainly given at the assemblies. But why couldn't an appearance by the best TMU detachment chief--with a paper on some concrete and pressing problem of aircraft maintenance or indoctrination of subordinates--be arranged? In specific cases, we should also make it a practice to discuss the main training and indoctrination problems and also to exchange opinions on this activity. There are enough leaders of socialist competition and people with endless devotion to their hard work.

For example, Technical Branch Capt Ya. Myazin, TMU chief of an outstanding detachment, is often named as being among the best. He is certainly an exceptionally industrious and conscientious officer and a first-class specialist. He has the ability to use time efficiently to increase his professional expertise and to deepen his ideological and theoretical knowledge;

he takes independent study seriously and he reads a great deal of military-technical literature; he is interested in the latest word in indigenous and foreign aviation and he diligently adopts the skills of his seniors. His aircraft is always kept in exemplary condition and in constant readiness to be started-up. He also has time to check the work of other technical crews. Although--it goes without saying--it is not easy for Myazin: basically, he spends all his duty time at the aircraft hard stand. He frequently returns home tired. But, after resting awhile, he always works on independent studies for an hour or so. This has become a habit with him.

In connection with the discussion of such a pressing problem in the pages of this magazine, I would also like to express my opinion on the importance of studying military pedagogy and psychology. As an engineer, I frequently attend different types of lessons and assemblies, but, frankly speaking: you seldom get to listen to talks on these topics. And, after all, not just the flight technician, but also any officer cannot get by without a knowledge of pedagogy and psychology. Those who organize and prepare assemblies for flight technicians and TMU detachment maintenance chiefs seemingly should not forget this. As is well-known, their role in organizing the superior preparation of missile-carrying aircraft has immeasurably increased today. Consequently, it is necessary to conduct training and indoctrination for this category of specialists on an even more purposeful basis, to more actively help them improve their professional expertise and to raise their ideological and theoretical level and their methodological and pedagogical expertise.

COPYRIGHT: "Aviatsiya i kosmonavtika", 1977

9001
CSO: 1801

MEDICAL OFFICER DUTIES IN A TRAINING AIR REGIMENT DESCRIBED

Moscow AVIATSIYA I KOSMONAVTIKA in Russian No 10, Oct 77
signed to press 30 Aug 77 pp 38-39

[Article by LtCol I. Botov: "You Can't Fly Today"]

[Text] Medical Service SrLt M. Reshetnikov, senior doctor at the air training regiment, usually begins his work day early. And this morning was no exception. He left home when the sun was just looking over the horizon.

Reshetnikov turned the corner of the last apartment building and started walking toward the flight-technical crew dining hall. A young woman was quickly coming toward him. He stopped and greeted her.

"Mikhail Mikhaylovich, my husband had a cold yesterday. True, it's over now, but..."

"Thank you," the doctor thanked the pilot's wife.

Reshetnikov knows everybody in the regiment and everybody knows him; they have complete faith in him. The officer values this; he believes that if you are not liked by the people, then the flight surgeon's work is practically unthinkable.

Here is the flight-technical crew dining hall. Breakfast will begin soon. Reshetnikov noticed misted decanters of kvas on two of the tables in the cadets' room.

"Pilots aren't having breakfast here, are they?" he addressed the waiter.

"Cadets."

"But I already told you that they're flying today..."

"Excuse me, I put the kvas in the wrong place. I'll take it away right now."

"Exchange it for cold compote. And ask the dining hall chief to come here."

When the latter arrived, the doctor reminded him which dishes can be included in the pilot's menu before a flight and which cannot--in spite of the requests and inducements from those being fed.

These are prosaic, usual, everyday events. But it only seems that way. After all, there is a close relationship between a pilot's cough, cold kvas--which everybody likes--and flying.

It's time for the pre-flight medical exam. One after the other the cadets and instructor pilots enter the senior doctor's office.

"How are you, comrade senior lieutenant..."

"Hello, sit down. How do you feel?"

"Great," answers the cadet.

"That's true. Both your blood pressure and your pulse are excellent. Have a good flight."

The cadet leaves, satisfied and happy. His good spirits were raised even higher. It is very important to get the doctor's "okay." The doctor is now checking the other airmen's health.

Four years ago Reshetnikov graduated from the Order of Lenin, Red Banner Military Medical Academy imeni S. M. Kirov in Leningrad. And he was immediately assigned here, to the training regiment of the Air Force pilot institute. During this time, he has been able to earn a high level of prestige. Industrious, attentive to people and kind, Reshetnikov is able to take each person's psychological condition into account--be he a pilot, cadet, mechanic or soldier from the support subunit.

The doctor is examining an instructor pilot.

"Everything's okay. But I don't like the looks of your throat," says Reshetnikov. "During yesterday's preliminary preparations, I noticed that you had a cough."

"I have to fly with the cadets, and you don't get sick over every sneeze," the instructor tries to turn it into a joke. "I feel okay."

"I am requesting that you be sent to the health center and somebody else will work with the cadets."

This sounds uncompromising...

"The senior doctor's opinion is the law for me," says the regimental commander. "There hasn't been a case yet where he made a mistake in his diagnosis. We haven't had a single flying hazard connected with medical flight support. This is the best result of the preventive measures which are performed by officer Reshetnikov. He is a conscientious person."

Conscientious... Like a flight surgeon. Reshetnikov is obligated to constantly monitor the preparation of the flight planning schedules so that the workload corresponds to the flight crew's state of health and physical endurance. Frankly speaking, this is an extremely ticklish responsibility. After all, he must keep in mind not just the general physical data of each airman, but he also must know what the pilot did yesterday, today and a week ago. Only under this condition can he successfully handle this task.

Reshetnikov is exceptionally observant in this respect. Once the senior commander arrived at the regiment. He inspected the training process. They planned a zone flight for him with one of the instructors.

"Comrade general, the examination please," Reshetnikov addressed the commander.

He listened and examined him. Then he said:

"You can't fly today. Your respiratory passages are beginning to turn red..."

"Don't make up things!"

"There's nothing I can do, comrade general," Reshetnikov calmly answered, "I am obligated to report to the commander."

Naturally the flight didn't take place. And the doctor turned out to be right: by dinnertime the general's temperature had risen and he went to bed. And, unfolding the crumpled-up prescription, he told the regimental commander:

"Your young doctor did a good job. Tell him thanks."

Thanks to the senior doctor's initiative, a classroom on aviation physiology, psychology and hygiene and a good rest area were set up in the altitude chamber building and a refrigerator appeared in the airfield dining hall. There is also a rest area for the technical engineering personnel at the airfield now. Through Reshetnikov's active participation, a lot of useful things were done in the regiment for the cadets' training and activities and for their teachers' labor and rest, especially lately--during the All-Army Inspection-Contest for the best troop (ship) administrative and financial services unit, medical institution and military unit trade-personal services enterprise which is dedicated to the 60th anniversary of the Great October Socialist Revolution. The work in this direction continues.

"I have known a lot of doctors," says the regimental commander. "But communist Reshetnikov is not only a highly skilled and industrious specialist who knows his flight work well and who is able to organize flight medical support. He is a man with an inquisitive mind, a researcher."

Reshetnikov is actually doing a lot of work in one of science's most difficult areas--the psychology of man. He is trying to teach the cadets to control themselves, their emotions and behavior, to force themselves to function as required in a suddenly evolving, complex situation and to teach them the art of self-understanding. "Self-Regulation of Psychological States" is the subject of the regimental senior doctor's future dissertation.

The officer wrote to a scientist who is well-known in this field about the first results of his work. He attached the results of his personal observations and conclusions to the letter. The scientist familiarized himself with the material, approved the regimental doctor's work, gave some advice and agreed to be the young dissertation writer's scientific instructor. This inspired Reshetnikov even more and gave him confidence in his applied work.

The beginning of the voluntary training on self-regulation of psychological states was received with a certain amount of mistrust in the regiment.

"I forbid Cadet Novodarskiy to attend your lessons. He is not very calm and you are teaching him to weaken himself even more," one of the young instructors berated the doctor once.

It took a lot of Reshetnikov's labor to convince him to the contrary. To make up for it the same officer pointed out after a short period of time:

"I don't recognize Novodarskiy. He has confidence and self-mastery. And he began to fly better."

At the present time, some of the instructor pilots are asking that a particular cadet be included in the group being trained. But Reshetnikov has one rule: only on a voluntary basis; no pressure. Now, besides the basic group which has already been formed, new ones are coming to the recurring 30-minute methods classes on autogenic training.

In order to stay on top of all the scientific accomplishments in his chosen field, Reshetnikov maintains contact with many of the country's scientific libraries.

While helping the cadets master the art of self-mastery and while developing the methods, Medical Service SrLt Reshetnikov is strictly complying with the rules he set for himself for his self-improvement and for deepening his own knowledge. The analysis and generalization of the observations made during the day, reading scientific literature, daily language lessons and developing a detailed plan for the next work day have become a law for him.

COPYRIGHT: "Aviatsiya i kosmonavtika", 1977

9001
CSO: 1801

FLIGHT CONTROL OFFICERS: GOOD AND BAD EXAMPLES DESCRIBED

Moscow AVIATSIYA I KOSMONAVTIKA in Russian No 10, Oct 77
signed to press 30 Aug 77 pp 40-41

[Article by Col B. Mamayev, military pilot first class: "You Are Obligated To Help: Constant Attention To Flight Safety"]

[Text] During a flying program, a large volume of information comes into the control point on different channels. During the intense work, the flight control officer keeps the entire air situation in mind; he must always be ready to come to a pilot's assistance when necessary. He receives and transmits commands every 6-10 seconds. Essentially, the control process is just as complicated as flying.

It is understandable that no one person has the ability to singlehandedly receive and understand this stream of reports and inquiries, to react to them without errors and to maintain competent and continuous control of the numerous crews throughout different stages of flight. The successful solution to this most important problem is only possible by clearly dividing the duties between officials on a zone basis and by a high sense of responsibility for control in the zones.

For example, the right to control crews is given to the ground controlled approach (GCA) controller and the command post (CP) officer. Like the flight controller, they are completely responsible for the flight's satisfactory and safe outcome. Many cases can be cited which demonstrate how these specialists contribute to successful mission accomplishment in a complex air situation. Thanks to the skillful and clear-cut commands from the ground, the pilots fly their aircraft (helicopters) more confidently and calmly.

I remember when an unwarranted decision was made in one the units to begin flying under IFR conditions. Almost immediately after the fighters took off, the weather sharply deteriorated.

The cloud base became lower and horizontal visibility decreased to the minimum.

The flight controller, Maj A. Mazhenkov, functioned hesitantly in the evolving situation. He began to land the aircraft at their airfield in weather conditions which were not appropriate to the pilots' training level, even though the weather was better at the alternate points. As a result, a bad situation arose.

As the saying goes, luckily the GCA controller, SrLt Vepritskiy, did not lose his head. Using the radar equipment entrusted to him in an outstanding manner, he gave the commands clearly and calmly. This help from the ground had a positive effect on the pilots' morale; it strengthened their confidence in their powers and the flight's successful outcome. As the objective monitoring gear showed, thanks to this they faultlessly maintained the prescribed regime on the glide path during descent and landed successfully. Everything ended as just a flying safety hazard.

It is a well-known fact that to a certain extent every pilot is tense while flying and even more so the less experience he has. This makes a pilot sensitive to surrounding irritants. If unwarranted, confused or unintelligible commands had been given from the ground in this situation, then the consequences could have been different. SrLt Veritskiy was awarded a valuable present for his superior expertise and his clear-cut, skillful actions in an adverse air situation under IFR conditions.

Communist SrLt A. Chernykh has proven himself to be a competent GCA controller. Once, the crews were practicing combat applications at the range. When the aircraft were following their prescribed route after completing the bomb runs, officer Chernykh discovered a blip on the PPI scope off to the side of their line of flight.

"245, take a course of 60," the lieutenant transmitted.

"I have that course," the pilot's answer followed.

The GCA controller understood that something was wrong with the on-board compass system. And, indeed, the aircraft compass had malfunctioned due to an aircraft specialist's error. But the crew did not notice it at first. A situation arose in the air whereby the crew needed not only additional information or commands from the ground but also true help and moral support. Chernykh helped the pilot make it to the airfield and

he confidently landed under IFR conditions. Officer Chernykh functioned clearly, calmly and skillfully during the tense situation. Confidence--in his combat comrades' superior flying skills and in their ability to skillfully complete the flight--rang out in his tone of voice. To a significant degree, this caused the successful outcome.

Of course, there is nothing surprising in these examples. Many GCA controllers and CP officers are true experts in their field. They are striving to perfectly master their official duties; they are constantly delving into the dynamics of flight and air combat; and they are improving their professional training level.

Unfortunately, other cases are also still encountered. An analysis of flying safety hazards shows that some GCA controllers and CP officers--due to inadequate preparation or complacency--sometimes are not rendering the proper help to pilots even under VFR conditions. Furthermore, in some cases they are complicating the crews' working conditions.

While flying a fighter at night, under the hood, in VFR conditions, the pilot misread his indicated altitude and caused a flying safety hazard. As it became clear later, this could have been prevented if the control group--headed by Maj A. Mazhenkov--had promptly performed their duties of monitoring the aircraft. Meanwhile, officer P. Andreyev, the GCA controller, displayed excessive complacency; when the aircraft was descending on the glide path, he only monitored the range and course; he didn't follow the altitude. The officer didn't make full use of the GCA radar capabilities and he didn't take timely action to help the pilot who found himself in difficult straits.

Another case. During daytime flight under VFR conditions, Lt V. Skvortsov was practicing on the flight leader with his AI radar. He mistook a false return on the screen for the target and he deviated significantly from the prescribed route. Of course,--it was established during the analysis of this flying safety hazard--the flight leader, Capt V. Chernevich, had poorly prepared Skvortsov for the flight. The pilot did not have this exercise sequence down pat and he didn't observe the safety procedures. He also didn't report loss of visual contact with the flight leader.

However, specialist first class Capt D. Radkevich, the CP officer was completely derelict in his duties. He did not study Skvortsov's mission the evening before and he had learned the safety procedures for this type of mission extremely poorly.

Radkevich was inattentively controlling them and he didn't notice the separation of the aircraft blips on the screen. Capt Radkevich did not react to the plotter's report that Skvortsov was deviating from the prescribed route.

And here is what else came out during the critique. A procedure exists in the Air Force whereby, before practicing a new flying mission, the pilot and flight control group personnel enter its entire sequence in a notebook ahead of time; they set forth the procedures for their work and they make the computations required for the operations in the air and in the event of an unforeseen change in the situation. Neither the pilot nor the CP officer worked this out. Nevertheless, the flight leader, Capt V. Chernevich, and the CP chief, Capt Yu. Pogonin, wrote a report on the good flight preparation of both of the parties guilty of the flight safety hazard.

These and similar instances show that proper attention is not always being given to the training of CP officers and GCA controllers nor to instilling in them a sense of high personal responsibility for ensuring flying safety. The struggle for safety can only be effective if it is based on procedures which prevent the occurrence of mistakes and flying safety hazards. And, of course, with the proviso that officers who have not mastered their studies and who are poorly trained will not be allowed to control aircraft. And, for this, it is necessary to strictly monitor the training level of flight control group personnel in accordance with the documents which are in every unit.

The leading commanders and chiefs of flying units pay assiduous attention to the training of CP crews and GCA radar system controllers. They always monitor their readiness to perform their official duties and their ability to render immediate, effective help to pilots, especially in an adverse situation. Without fail, the work performed during a flying program or during a specific period of time is thoroughly analyzed and evaluated. At the same time, everything of value is adopted and ways are planned to eliminate mistakes during follow-on training exercises.

This systematic, purposeful work has gratifying results. The help of the experienced chiefs enables the CP officers and the GCA radar system controllers to acquire the necessary knowledge and skills more quickly. And a well-tuned monitoring effort promotes the development in them of a sense of high responsibility for exemplary performance of their official duties.

But, in isolated cases, the training and indoctrination of CP and GCA specialists is still not at the proper level. This leads to expenses in the command and control of crews in the air. Some CP officers sometimes mix-up the pilots' callsigns, transmit insufficiently clear commands to the aircraft and make other mistakes. Naturally, this damages flying safety. The expertise of specialists--who are called upon to be the flight controller's reliable and faithful assistants in any situation--is growing more slowly than required.

Of course, it is not that simple to train GCA controllers and CP officers who can skillfully control crews and never make a false step in an adverse situation. After all, the ability to clearly and confidently perform their official duties did not immediately come easy for SrLt Vepritskiy or Lt Chernykh. At first, there were disappointing blunders in their work. But, their senior comrades persistently and consistently taught them. After a detailed analysis of the mistakes, they made the air situation more complicated during the training exercises. The results of this training are obvious: the officers became true experts in their fields.

Sometimes it happens that a crew finds itself airborne under adverse conditions. Sometimes the pilot also starts to get nervous. Frequent inquiries and answers to them are made. In such situations, clarity and brevity of commands are required from those on the ground. If it can be expressed this way, the value of each word spoken from the ground increases.

No matter how complex and saturated the situation, the flight controller and crew controllers must remain calm and reasonable, skillfully evaluate the evolving conditions and come to the aid of those who need it. If a special situation has arisen, then it is extremely important to maintain the brevity and clarity of conversations and an atmosphere of special confidence. A word from the ground inspires the pilot; in his turn, the flight controller gets data from the tone of the report on the crew's psychological state and its ability to function in a critical situation.

Such qualities do not come to the flight control officer by themselves. Everything is developed by practice. On the day for preliminary preparations in the flying units, the flight control group works on its own plan under the control of the flight controller. Then the commander checks the work. After studying the flight planning charts, training is conducted for the control group in the training classroom and on special equipment where radio communication procedures and tactical problems on actions in special cases are practiced. The

flight controller models all the impending operations ahead of time with the entire group.

As practice shows, well-conducted training exercises significantly expand the flight control group's range of capabilities. Besides consolidating the skills for operations under special flight conditions, they have a positive effect on the specialist's psyche; they create a frame of mind which results in both the flight controller and his assistants being always internally prepared for work in a special case and they will successfully come out of the evolving difficult situation.

All life's evidence confirms that success in training competent, strong-willed and creative flight control group specialists is guaranteed not by some sort of special procedures and arrangements, but by good organization of training, by indoctrination and by constant work on raising people's sense of responsibility for outstanding performance of their official duties.

COPYRIGHT: "Aviatsiya i kosmonavtika", 1977

9001

CSO: 1801

PILOT ERROR IN BOMBING EXERCISE DISCUSSED

Moscow AVIATSIYA I KOSMONAVTIKA in Russian No 10, Oct 77 signed to press
30 Sep 77 pp 41-42

[Article by Sr Lt S. Tolstoy: "I Didn't Cope With My Emotions. . . ."]

[Text] Guards Senior Lieutenant G. Shipot'ko prepared himself painstakingly and comprehensively for a check ride with the squadron commander, Guards Major V. Voroshilin. And, this is understandable. The pilot's permission to undertake more complex lessons on the combat employment of the fighter depended in considerable measure on the results. The young officer again repeated the theoretical questions and worked through the mission in the simulator and in the aircraft cockpit. A check showed that everything had been accomplished as called for in the governing documents.

At the assigned time the two-place trainer took off. Shipot'ko soon received permission to approach the range. And, when the edge of the woods with target mock-ups appeared up ahead, a transmission was received from the ground.

"I see you. Begin work."

Maintaining the required horizontal area, the pilot began a descending turn. Having established the proper dive angle, he banked. He was convinced that he had set up his bomb run accurately.

Shipot'ko concentrated all his attention on the main thing -- correctly and in a timely manner begin the vertical maneuver, that action which greatly influences the accuracy of a toss bombing strike. Now! The officer brought the stick backwards. In seconds only the sky was in his field of view.

"Pickle!" he reported, but he did not press the button. The mission called for bombing only on the second pass.

"Good," the range officer tersely evaluated the pilot's actions.

Guards Major Voroshilin also approved of his subordinate's work. He would not prompt Shipot'ko, all the more so since there was no need to interfere. Everything went normally.

"On the combat run," the voice of Senior Lieutenant Shipot'ko again was heard in the range officer's loudspeaker a bit later on.

"Area. Now towards the ground," the young pilot mentally gave himself instructions. "There, that will do it. . . Don't deviate. Stand by. . . Maneuver!" The G-load forced the officer against the seat. And, a couple of seconds later Shipot'ko heard the characteristic thump which should have come somewhat later. The bombs released.

The range officer, closely monitoring the aircraft, noticed the clumsy work at once.

"What happened?" he asked the pilot. "Why did you release the bombs early?"

Guards Major Voroshilin asked the same thing a few seconds later.

"I released inadvertently," Shipot'ko quietly answered, still not understanding how this could have happened.

"Cancel the mission. Return to base," came the order from the ground.

After landing, the senior lieutenant was temporarily grounded. Officer Voroshilin and the flight commander immediately set about analyzing the potential accident cause. Shipot'ko received a rather justified reproach. The notation in the corresponding logbook column stated "Involuntary premature weapon release as the pitch-up was initiated due to incompetent actions on the combat course, which also led to a large bombing error."

Thus, unsure work with the fixture in the cockpit led to premature bomb release. How did this occur specifically? Here is how the squadron commander, Guards Major Voroshilin, concluded his tale about this sad error.

"Toss bombing requires not only accurate maintenance of the required speed and altitude, but also the correct rate of G-load build-up. Shipot'ko did everything correctly on the first pass. But, simulation of bombing and the actual thing are far from identical. In the latter instance, the emotional stress is considerably higher. Therefore, having created the G-load and lifted the safety from the release, the pilot suddenly lost control of his actions and almost immediately pressed the button."

Yes, as is evident from the potential accident cause logbook, the senior lieutenant's rather bad mistake arose not because Shipot'ko's theoretical knowledge is weak, but due to his involuntary actions. In other words, lapses in psychological training did not allow him to coolly pilot the fighter in the complicated situation, to skillfully and calculatedly operate the switch in the cockpit while on the combat course.

"The error is evidently mine," the young pilot admitted to his commander. "I was unable to collect myself as was required, to adjust myself to accomplishment of a complex and important mission. I lost control of my personal emotions. I understand that this is no justification. My comrades accomplished such a mission with complete success. But, I was unable to do so. . . ."

But, is it only Guards Senior Lieutenant Shipot'ko who is guilty in what transpired? To make that judgment would be to jump to conclusions. The potential accident cause committed by the young officer was clearly unexpected by many in the subunit [podrazdeleniye], including the commanders as well. Moreover, up until that time Shipot'ko had succeeded in making a good showing as a skillful pilot.

There is a firm rule in aviation, the essence of which can be expressed in the familiar formula "from the simple to the complex." And, a special chart exists for a visual representation of lessons accomplished. The entries for Guards Senior Lieutenant G. Shipot'ko are a varicolored flash (just as they are for several of his comrades). The chart also contains so-called "yellow squares," evidence of the fact that a pilot completed a lesson, but with deviations from the instructions in the governing documents. Let's say that Shipot'ko had to work out bombing from low altitudes. This he did, but. . . the assigned altitude did not correspond to that called for in these documents.

As a result of such an approach in the subunit to assimilation of complex missions, it turned out that the senior lieutenant had insufficiently firm skills in piloting the fighter at low altitudes, where the pilot's psychological stress is especially great.

COPYRIGHT: "Aviatsiya i kosmonavtika", 1977

7869

CSO: 1801

VIOLATIONS OF FLIGHT REGULATIONS DISCUSSED

Moscow AVIATSIYA I KOSMONAVTIKA in Russian No 10, Oct 77 signed to press
30 Sep 77 p 42

[Article by Lt Col I. Onishchenko: "His Own Fault"]

[Text] The weather deteriorated sharply during the flights and the group of bombers was diverted to an alternate airfield. Technicians had been brought in earlier via a transport aircraft to greet the crews. But, they were unable under such conditions to bring along everything that they needed.

A distant sector of the airfield was set aside where the bombers were to park. When the combat aircraft had taken their assigned places, officer technician V. Serdyukov began his inspection. Soon he said to the crew commander:

"I'll have to request a ladder. I'll go get one."

"Why do we need it today?" Captain G. Vakhrushev said with surprise. "We can insert the plugs in the inlets and the pins in the PVD [air pressure duct] like this."

"I want to examine the compressor blades," Serdyukov replied.

"And what's with them?" said the navigator, entering the conversation. "The engines operated quite normally."

This quieted them all down. The bus came soon thereafter and the crew went off to rest. But early the next morning, the order unexpectedly came to depart. Time left to prepare the bombers was, to say the least, very short. But Serdyukov decided all the same to examine the engine intakes and the blades in the forward stages of the compressors. And. . . he discovered nicks in them.

"I don't understand," said the crew commander, shrugging his shoulders in bewilderment. "Where did they come from?"

"Evidently we taxied too fast," suggested Serdyukov.

We will not touch upon the question of why the area for the remote parking was not readied to receive the aircraft at this time, even though it is undoubtedly very important. Nor will we discuss the actions of officer Serdyukov. In

spite of the existing procedure, he did not fulfill his responsibilities immediately after meeting the bombers. We will only briefly examine how Captain Vakhrushev acted at the alternate airfield.

After the landing, the flight director immediately warned him:

"062, taxi more slowly, be more attentive."

"Roger," answered the crew commander.

Initially he maneuvered the bomber carefully and maintained a low speed. But as soon as the aircraft passed the tower, the captain immediately increased rpm. The navigator tried to remind the commander about the speed but Vakhrushev only vexedly waved him off. Of course, the pilot was tired after the long flight, he wanted to shut down the engines as quickly as possible and deplane.

But, as is known, no one has the right to exceed the established taxi speed even on his own airfield. But, at an alternate airfield, the pilot and crew must be doubly careful. Violation of this rule brings with it unwanted consequences, just like what happened to Captain Vakhrushev.

Operation of complex aviation equipment requires of flying personnel not only profound theoretical knowledge and firm skills. In the air and on the ground, it is extremely important to be collected and always unswervingly adhere to the requirements of the governing documents. Moreover, even the slightest deviation from flight service laws, as practice shows, can complicate flight conditions. Here is one fact which affirms this truth.

Captain I. Salikov was tasked to be lead for a pair on a mission. The crew accepted the bomber without any write-ups. But, it happened that the airfield was closed by a bad snowstorm. Takeoff was delayed. Awaiting permission to start engines, the pilot decided to clean the snow off the windshield by using the electric heater.

It was 30 minutes before the green flare notified the crew to start engines. Taxiing out to the active, Captain Salikov noticed that a fine silver snake extended from the lower left corner to the center of the windshield. The crew commander instantaneously switched off the heater and irritably thought: "A crack. What should I do? If I report it, the mission will be busted." And he kept quiet about the incident.

The crew was airborne for several hours. Everything was normal and Salikov relaxed. And then he forgot about the ill-fated crack entirely.

But after accomplishment of a difficult mission at the range when the aircraft made a power climb, a cracking resounded through the cockpit. The windshield suddenly was completely covered with silvery glitters which at once cut off almost the entire forward hemisphere of the pilot.

This did not create any special discomfort at altitude. Actually, at the time, the last thing the pilot thought about was the landing. "My deputy will be able to land it," he decided. Something else bothered Salikov. Would the windshield be able to withstand the pressure of the oncoming air without breaking?

The crew made the landing without any serious deviations. But the flight director, Captain Salikov's subordinates, and Salikov himself lived through some alarming minutes. In actuality, the mission could have ended in another way. And all due to the pilot's lack of discipline, his violation of flight service laws, the completely unjustified risk.

It is fully understandable that every airman constantly prepares himself in a goal-oriented manner to surmount all difficulties in flight. But to consciously create them, as was the case here, is inadmissible. The fifth ocean does not forgive mistakes, neither big ones or small ones.

COPYRIGHT: "Aviatsiya i kosmonavtika", 1977

7869

CSO: 1801

FLIGHT INCIDENTS CONNECTED WITH RUNWAY SURFACES DISCUSSED

Moscow AVIATSIYA I KOSMONAVTIKA in Russian No 10, Oct 77 signed to press
30 Sep 77 pp 43-44

[Article by Engr-Col A. Zhuravlev, candidate of technical sciences: "The Pilot and the VPP [Runway]"]

[Text] Captain M. Zharkikh and Lieutenant Colonel V. Glukhov made a flight in a trainer. During the takeoff roll the aircraft swerved to the right and then ran off the VPP [runway] onto the ground. The crew had to cancel the mission.

Or take another example. After the bomber landed, the pilot popped the brake chute during the landing roll. But the chute ripped. The officer, it seemed, took all measures to stop the heavy aircraft on the runway. However, he did not succeed and the aircraft ran off the end of the runway.

A threat to flight safety was created in both instances. And, potential accident causes arose during the initial and the concluding stages of flight.

Designers, pilots, engineers, technicians, doctors, psychologists, and many other specialists write articles touching upon insuring good flight safety in the pages of AVIATSIYA I KOSMONAVTIKA. They elaborate upon a wide variety of problems linked with training aviators, their preparations for flight, and their work in the air. And this is understandable. I would like to dwell upon the pilot's actions during the initial and concluding stages of a flight (the take-off roll and the landing roll) as they relate to runway conditions.

It is known that moral-psychological factors now play an ever growing role in flying. This is stipulated by the nature of flying today, in particular by the increase in speeds and by the continually rising volume of information that a pilot has to process during an intercept, in an air battle, when attacking ground targets, and on a navigational flight. Certainly, it is for this reason that the specialists usually concentrate mainly on these most vital, if you can use that expression, stages of flight when they write for this journal. But, life gives witness to the fact that it is not only on these stages that flight safety is insured to an equal degree. For the influence of moments unfavorable for the pilot (as a result of the rise in aircraft speeds) also increases during the takeoff roll and the landing roll. And these elements, as is known, are always very important and depend to no small degree upon the quality of the work performed to prepare the VPP for flying operations. The condition of the

airfield pavement in a specific situation can be the reason for a potential accident cause. That was the case in the examples with which we began this discussion.

Officers Glukhov and Zharkikh are military instructor pilots first class and have a great deal of experience. But, both made serious mistakes. Captain Glukhov lined his aircraft up not on the VPP centerline, as is required for a single ship takeoff, but rather offset towards the right edge. Besides that, he lined up at a 10° angle to the right of the runway axis. Lieutenant Colonel Glukhov, the monitor, paid no attention to this. Apparently, the pilots intended to correct for this deviation during the beginning of the roll. But, they did not succeed since this took place during the transitional time of the year and the VPP was wet.

In the second example, the cause arose due to the fault of the bomber crew commander. A rather experienced pilot, he decided that he was able to make a normal landing with a somewhat heavy fuel load, that is he violated extant regulations. The bomber's increased weight forced the pilot to maintain a higher approach speed and he landed hot. The pilot popped the drag chute early, which caused it to rip. As we can see, the officer's lack of discipline and his mistakes are evident.

However, not only this is a potential accident cause. It rained at the airfield just prior to the bomber landing. The VPP was wet and naturally the conditions for stopping a heavy aircraft deteriorated. This also was a reason for the bomber running off the end of the VPP.

A great deal of rather labor-intensive work must be done so that the modern runway with an artificial surface more fully satisfies the multitude of requirements placed upon it. They begin with creating and insuring favorable conditions for aircraft takeoffs and landings. We will briefly discuss some of these conditions.

If the VPP surface is not sufficiently smooth, for example, vibrations can result or aircraft can bounce during the takeoff and landing roll. And, this causes extra physical loads for the pilot and complicates the takeoff and landing. In addition, the surface must possess a specific macro- and microstructure of irregularities. Their characteristics are selected taking into consideration the interaction of the aircraft gear with the runway. In particular, the requisite microstructure is formed by the roughness of the particles of coarse filler in the VPP surfacing material. It insures the breakup of the thin film of liquid in the tire footprint zone. The macroroughness primarily facilitates expulsion of water from under the tires and in that manner averting formation of fluid friction.

Consequently, the ability to combat hydroplaning of the aircraft tires lies in the very design structure of the VPP. But, it goes without saying that this is insufficient. Airfield services specialists must systematically monitor the condition of the VPP, remove snow, ice, dirt, and petroleum products from the artificial surface, reducing in this manner the probability of hydroplaning.

The high speeds of flying equipment materially raised the requirements made on the operating qualities of VPP, hardstands, and taxiways. They cannot contain

indentations and splits, which negatively affect the safety of aircraft takeoffs and landings. Practice shows the rough spots which appear in the process of using surfaces as well as due to effects of aircraft loads, climatic, and other factors can lead to unfavorable consequences.

One of officer A. Chichnev's subordinates, making a regular inspection of the airfield with the flight director, noticed an indentation in a spot where the end of the VPP joins the taxiway. It would seem that the officers should have been informed. Moreover, having been informed, they decided that, since the aircraft speed at this location is not that great and shouldn't affect control of the aircraft, repairs could wait until the flying program ended. But, during the day, the weather deteriorated sharply, rain with snow fell, and this greatly affected visibility along the horizon.

Officer pilot I. Semyakin overshot his landing. He was unable to reduce his speed to the minimum at the moment of turn off. As they say, a chain is only as strong as its weakest link and this was the case here. The nose gear hit the indentation and the gear strut was damaged.

This example, again demonstrating the validity of flying rules which state that there are no insignificant points where flight safety is concerned, can be examined from at least two points of view. We have already spoken about the first, a purely organizational and special one. We will now discuss the second, the psychological one.

Preparing to carry out an assigned mission, an airman at class lessons and in simulators acquires, improves, and solidifies specific knowledge and skills. His conviction concerning successful mission accomplishment continues to grow. It is uniquely supported also by information concerning all types of flight support provided by commanders and specialists during the period of timely, preliminary, and preflight preparations. Relative to our discussion, we can express this concept in the following manner.

Both prior to takeoff and prior to landing, the pilot is psychologically convinced that the runway is in excellent condition. Also, aviation psychologists have established that, in spite of specific difficulties in accomplishing the takeoff and the landing rolls, a pilot realigns a significant portion of his consciousness on future activities involving the controls for the gear, the mechanization of the wing, the brake chute, as well as on the more remote items, let's say occupying the piloting zone or the taxiway, and so on. That is, he carries out the takeoff roll and especially the landing roll in no small degree using automatic skills. That is why, when physical defects in the airfield pavement require an "unprogrammed" response to the difficulty presented, as a rule sharp nervous stress arises.

At that moment, urgent formation of a new program of mental and motor operations directed towards elimination of the situation created often takes places in experienced pilots who possess high emotional-volitional qualities. But, a stress situation which often leads to disorganized chaotic actions can occur in those pilots whose practice is limited and whose psychological tempering is weak.

Contemporary aviation medicine specialists have established that the secret of success in extricating oneself from a non-standard situation are not only the automatic motor actions, but also mental skills of the operational thought type. Consequently, since even excellent VPP, hardstands, and taxiways can suddenly be covered with water and snow, it is advisable in the interests of further improving flight safety to introduce into the training system instruction on skillful actions in an emergency ground situation.

Of course, the pilot receives information on the condition of the VPP, weather conditions, and so on from the commander, flight director, and the weather reconnaissance flight. He uses this information to structure his operations on the takeoff roll and the landing roll. However, we think that it is advisable to do other things as well for more reliable actions as these elements are accomplished.

A map diagram or a special movie film can be made in each unit [chast']. Each must delineate the distinct features (as seen from the air) of all those extreme physical factors of the airfield pavement which a non-standard situation can create. Having assimilated these features in detail, a pilot forms visual standards in his lasting memory which will later facilitate selection of this or that sequence of forthcoming actions. Certainly, such diagrams will be very valuable when organizing overshoots and during accomplishment of an airfield maneuver during tactical flying exercises. It would also be useful, in our opinion, to develop and enumerate deviations in aircraft movements given the presence of airfield pavement defects in comparison with its normal operating condition.

But, aviation psychologists think that simple memorization of these features is not enough to insure a pilot's reliable actions in an emergency. In this connection, actions on the landing roll can be demonstrated, i. e., the aircraft's actions depending upon the condition of the airfield pavement can be modeled and methods to eliminate deviations from the assigned mode of aircraft movement indicated. It goes without saying that such lessons require a great deal of attention on the part of supervisory personnel.

Thus, insuring the safety of the initial and concluding legs of a flight greatly depends upon the condition of the artificial airfield pavement. It calls for skillful use and timely completion of preventive maintenance and repairs. And, drills to form models of the extreme factors which sometime arise on the VPP and other measures taken with flying personnel, in our opinion, will increase the effectiveness of airmen's actions during non-standard situations.

COPYRIGHT: "Aviatsiya i kosmonavtika", 1977

7869

CSO: 1801

COMMENTS ON U. S. CRUISE MISSILE CAPABILITIES

Moscow AVIATSIYA I KOSMONAVTIKA in Russian No 10, Oct 77 signed to press
30 Sep 77 pp 46-47

[Unattributed: "Reliance on Strategic Cruise"]

[Text] Cruise missiles being developed at the present time in the USA are intended for accomplishment of strategic missions. Depending upon them and beginning their testing, the Pentagon is creating a serious obstacle to achievement of an agreement between the USSR and the USA on limiting strategic arms, which the peoples of the world are awaiting. The Soviet Union and the world society decisively oppose the opening of this new channel of the arms race.

The American press describes two cruise missile variants which are undergoing testing. They are the ALCM launched from aircraft (being developed by the U. S. Air Force) and the SLCM launched from submarines and surface vessels (being developed by the U. S. Navy). The latter is referred to as the Tomahawk.

Based on U. S. press reports, the Tomahawk missile has a 3,700-km range and the ALCM a range of 2,200 km.

The ALCM has a mass of 860 kg, is 4.3 meters long, and its fuselage is 0.6 meters in diameter. The missile is equipped with a folding wing (span of 1.9 meters) and a tail assembly.

The Tomahawk resembles a torpedo in shape. It is approximately 6 meters long and has a diameter of 0.5 meters. It also has a folding wing and a solid fuel accelerator.

Both missiles travel at subsonic speeds in the main at a low altitude. It is envisioned that they will have common components, warheads, sustainers, and guidance systems. They both have a turbofan engine.

The missiles are equipped with a primary and a back-up guidance system. The primary system provides guidance in the initial and middle leg of the trajectory and the back-up provides guidance for the final leg. An inertial system

Based on foreign press materials.

with a TERCOM unit serves as the main guidance system for guidance along the vertical contour of the terrain. The unit includes a standard radar altimeter and airborne TsVM [digital computer], which in real time compares altimeter data with the terrain profile recorded in digital form on a magnetic tape. The terrain profile data are received beforehand from satellite photography. A microwave radiometric guidance system functions as the back-up system. It includes a passive radiometer which records radiation reflected from the earth's surface.

Official U. S. Navy representatives have announced plans to equip all strike submarines with Tomahawk missiles. This means that they will be the first to carry a strategic weapon. Based on some reports, the question of arming nuclear submarines carrying Polaris and Poseidon strategic ballistic missiles with cruise missiles is being examined. According to calculations by American observers, 1,264 Tomahawk missiles can be purchased for the U. S. Navy. Air Force representatives say that they will need 2,357 ALCM for "long-range planning purposes." One bomber is capable of carrying 20-30 such missiles. It is also noted that, in addition to the B-52 and B-1, military variants of the Boeing 747 (up to 100 missiles per aircraft) and C-135 and C-141 military transports (up to 50 missiles each) can also carry the missiles.

At the beginning of the year, the U. S. Department of Defense, having studied progress on production of this weapons type, decided to continue to build both missiles. Moreover, the Air Force was instructed to develop an additional ground-based cruise missile using the Tomahawk as a starting point. The new cruise missile is to be launched from a wheeled or a tracked transporter-erector and additional funds were allocated for this work. In the opinion of observers, several thousand ground-based cruise missiles can be purchased.

Six types of cruise missile are being developed in all. Their construction programs will cost the American taxpayer about 5.1 billion dollars.

Some foreign observers explain the Pentagon's special interest in the new strategic weapon by saying that it "undoubtedly will complicate the process of finding new frameworks for arms control." It is clear that such a position reflects the desires of the U. S. military-industrial complex.

In spite of the sharp censure and widespread wave of protests, the President of the United States J. Carter announced his decision to begin deployment of the new strategic weapon. This means that, to the "Triad" which has existed for many years, that is the three components of the U. S. strategic arsenal -- the intercontinental ballistic missile, ballistic missiles on submarines, and the heavy bombers -- is added a fourth -- cruise missiles.

COPYRIGHT: "Aviatsiya i kosmonavtika", 1977

7869

CSO: 1801

COMMENTS ON NATO EMPLOYMENT OF HELICOPTERS AGAINST TANKS

Moscow AVIATSIYA I KOSMONAVTIKA in Russian No 10, Oct 77 signed to press
30 Sep 77 pp 46-47

[Article by Engr-Col I. Chebotarev, candidate of technical sciences: "Helicopter Versus Tank"]

[Text] Ever increasing attention is being placed in the military preparations plans of the aggressive NATO bloc on development and improvement of combat helicopters and equipping them with effective antitank weapons. Foreign military specialists think that the helicopter armed with antitank guided missiles can successfully cope with armored targets in those instances when ground-based antitank means as well as aircraft are ineffective or their employment is impeded. Another advantage of helicopters is that they can conduct combat operations in heavily broken terrain at a wide range of flight speeds and they are very maneuverable. In addition, an antitank weapon can be employed from maximum range from a helicopter at a time when this is impossible from a ground launcher, since terrain folds and other objects limit the ground-based operator's field of view.

It is also noted that, in comparison with aircraft, helicopters depend less on weather conditions and can operate against tanks and other small targets under the overcast at minimum altitudes. Foreign specialists also note that helicopters armed with antitank guided missiles are more effective than aircraft against armored targets on the battlefield due to conditions more favorable for the 3-point method of guidance (the eyes of the operator -- the missile -- the target).

Range tests and combat testing in Vietnam of the UH-1 Iroquois and the AH-1G Huey Cobra armed with the TOW antitank guided missile demonstrated that the probability of destruction of tanks, armored vehicles, cargo trucks, and other small targets approached 0.8.

However, as the foreign specialists point out, combat operations in Southeast Asia also demonstrated something else. Ground fire represents a serious threat to helicopters on the battle field. Their high vulnerability when carrying out

Based on foreign press materials.

missions over enemy territory because of their slow speed as compared to aircraft and, consequently, the longer they remain in range of enemy air defenses and small arms weapons. Poor protection for vitally important helicopter components and the heat radiation also increased their vulnerability.

Nonetheless, according to INTERNATIONAL DEFENSE REVIEW, the helicopter is the tough enemy of tanks. At low altitude, it approaches "the target of attack, using any cover it encounters, just as the infantry has always done." Here, the observers are using data obtained during NATO troop maneuvers, when Huey Cobra fire support helicopters and OH-58 Kiowa reconnaissance helicopters were employed against Leopard tanks. As a result of the duel "battles," the overall "loss" relationship was 14 : 1 in favor of the helicopters.

Based upon know-how from local wars and exercises, military specialists from the USA and other capitalist states are seeking methods for the combat employment of armed helicopters. American specialists are coming to the conclusion that it is most advisable to use helicopters at minimum altitudes. As AVIATION WEEK writes, it is difficult for radar to detect them at these altitudes and hard for surface-to-air missiles to identify and destroy them.

According to a statement by the former commander of Army Aviation in South Vietnam, helicopters employing TOW antitank guided missiles from low altitudes were not lost to surface-to-air missiles since they were hard to detect. Moreover, the sensitivity of the seeker heads of the heat-seeking missiles was suppressed by the infrared background of the battle field.

Fire support helicopter combat against armored targets is envisioned in approximately the following scenario. Reconnaissance of the targets, sudden appearance from concealment, sighting in from a hover, attack lasting 10-15 seconds with one antitank guided missile launch, and rapid egress from the zone of combat operations. Operations from ambush are also envisaged. In these cases, the helicopters are located in concealed positions and, at the required moment, they lift off and attack the tanks. Natural concealment is recommended, such as forest clearings, hills, river valleys, copses, and populated points on axes difficult for enemy tanks to pass through.

During the progress of the battle, a special role is assigned to the antitank reserve. Assigned the mission, the reserve helicopters, using minimum altitudes and terrain relief, approach to within visual range of the tanks, sharply climb, and launch their antitank guided missiles in a volley. They then descend and depart for their positions.

Foreign military specialists think it advisable to use helicopter fire strikes when the enemy is in columns on the march, moving to deployment lines, reforming into pre-combat and combat formations, or maneuvering along the front. At that time, the density of armored targets on the terrain, in their opinion, reaches its maximum and they themselves are without concealment. The helicopters in such a situation employ an integrated strike -- the launch of antitank guided missiles against individual targets and massed fires of unguided missiles against group targets. The commander makes the decision to employ helicopter strikes on the basis of reliable information from all types of reconnaissance as to the disposition, number, and nature of the operations of the armored troops.

At the present time, the views held for a number of years by specialists from the USA and other capitalist countries on building fire support helicopters are undergoing reevaluation. The term "antitank helicopter" received wide dissemination overseas. This is a new name for fire support helicopters. The appearance of this term is explained by such requirements levied on combat helicopters as high flight speed, load capacity, capability of mounting numerous weapons of various types on the weapons stations, dropping of antitank and antipersonnel mines from the air, and highly automated viewing and sighting, navigational, and weapons control systems.

The AH-56 Cheyenne experimental helicopter, the development of which cost the American taxpayer more than 400 million dollars, satisfies most of these requirements. However, it did not go into series production after testing. The U. S. Army wrote up new tactical-technical specifications. The helicopter must have a relatively low cruising speed (about 280 km/hr), be simple, light, maneuverable, all-weather, have powerful antitank weapons (8-16 antitank guided missiles and a 30-mm cannon), reliable armor protection for the vital components, and a relatively low cost.

The U. S. Army is modifying the AH-1G Huey Cobra at the same time they are developing a new helicopter. Mainly, it is equipped with a large number of antitank guided missiles (8-16) and mounts a movable 30-mm cannon and equipment so the weapons can be used at any time of the day. Great attention is being placed on development and refinement of the antitank guided missiles.

NATO military specialists think that one of the problems involved in development of the antitank guided missile is the control system, which exerts an influence on the possible maximum speed of the missile, on the complexity of its guidance to the target, its resistance to electronic countermeasures, and its accuracy.

At the initial stages in development of helicopter antitank weapons, the so-called manual method was used. Here, guidance probability depended upon the individual traits of the operator and his training and ranged from 0.2-0.8. The 0.8 probability relates to the skills of a "capable" operator, developed on a ground-based simulator and after numerous instances of actually guiding a missile to a target.

In the opinion of NATO military specialists, wire guidance was not ruled out in the interests of resistance to electronic countermeasures. In addition, this method does not require amplification of guidance signals in the missile receiver, simplifies its design, and reduces weight. It is also simple and advisable. Disadvantages are the possibility of the wire breaking and control being lost and the limitation on the missile's cruising speed to 200 meters per second caused by the maximum possible speed at which the wire can deploy.

There is no limitation on missile cruising speed when radio control is used. This allows the use of supersonic missiles, which have an advantage in one-on-one situations. However, the disadvantage is that there is no reliable protection against enemy electronic countermeasures. Protective measures complicate the design of the transmitter and receiver on the missile.

Second-generation antitank guided missiles use a semiautomatic missile guidance method in which the operator accomplishes an elementary operation -- he aligns the sight crosshair with the target, but an automatic electronic device corrects the flight of the missile. The American TOW, French AS-12, and the HOT (joint production by the FRG and France) wire-guided missiles fall in this class.

Third-generation antitank guided missiles developed overseas are equipped with simplified seeker heads that are laser sensitive. The operator illuminates the target using a laser in order to guide such missiles. The missile, guided by the seeker head, moves in the direction of the greatest intensity of the laser beam reflection from the target. Laser illumination of the target can be done from another helicopter or from a forward ground post. Such a missile called Hellfire is undergoing development in the USA. In the future, according to foreign specialists, combat helicopters will be armed with self-guiding antitank guided missiles.

Thus, more and more attention is being devoted in the armies of the NATO countries to development and refinement of combat helicopters due to the improvement in tanks and the rise in their role on the battle field. As a result of analysis of U. S. combat operations in Southeast Asia and from exercises conducted, views have changed on the combat employment of direct support helicopters. The tactical and technical requirements have been determined for the new helicopters and their armament, as well as for the antitank guided missile intended for operations day and night, in good and bad weather, from minimum altitudes, and with intensive concealment on the terrain.

COPYRIGHT: "Aviatsiya i kosmonavtika", 1977

7869

CSO: 1801

NEW SNOW AND SWAMP-GOING VEHICLES DESCRIBED

Sofia SERZHANT in Bulgarian No 11, 1977 pp 26-28

[Article by Engineer Colonel Rashko Todorov: "New Transport Means"]

[Text] Sixty years ago Russian workers and peasants raised the red flag with the sickle and hammer as a symbol of the victory of the Great October Socialist Revolution, and volleys from the "Aurora" heralded to the world that a new era was coming for mankind. At that time hardly anyone thought that in only 60 years Russia, extremely backward for that time, would become a symbol of human progress.

The beginning was difficult. An economy completely destroyed by the civil war and intervention, hunger, misery and poverty. But the Bolshevik Party led the people. Gradually in the murk of backwardness the lights of progress began to flash one after another. The achievements of the Soviet land in the development of the economy, science, culture and the people's way of life after the Great October Socialist Revolution are boundless.

Like all sectors of the USSR's national economy, Soviet automobile manufacture, offspring of the Great October Socialist Revolution, developed at an extremely high rate. The first ten Soviet motor vehicle demonstrated on the Red Square on 7 November 1924 on the occasion of the seventh anniversary of the Great October Socialist Revolution. From then until now in a little more than 50 years more than 25 million motor vehicles have been produced. The worth of this figure can be realistically appreciated if one bears in mind that in 1924 only one small motor vehicle plant existed. Now the Soviet land has large motor plants -- ZIL [Moscow Automobile Plant im. I. A. Likhachev], GAZ [Gor'kiy Automobile Plant], Leninskiy Komsomol, Togliatti, Kamaz [Kama Automobile Plant] etc. They are the basis for the fulfillment of the great assignment of the Tenth Five-Year Plan -- that of producing 2.1-2.2 million automobiles in 1980.

Even during the present five-year plan the efforts of the Soviet people are directed at opening up the incalculable resources of the northern and eastern regions of the country. In Western Siberia, Komi Autonomous SSR,

Yakut Autonomous SSR, Murmansk, Arkhangel'sk and Magadan oblasts large deposits of oil and gas and other mineral resources have been discovered. The area of these vast territories occupies 13.9 million square kilometers or 62.1 percent of the area of the huge Soviet land. All these resources, however, are in regions characterized by especially difficult natural and climatic conditions. The mean temperatures in the month of January go to -20°C , and in some regions of the so-called Far North to -35°C . The absolute minimum temperature of the ambient air in the winter goes below -50°C . The zone of the most northerly climate includes the Yakut Autonomous SSR and Magadan Oblast. The principal oil and gas deposits in Tyumen' Oblast are in regions of impassable swamps. Railroads have not yet been built here, and aircraft and helicopter facilities are extremely limited. The utilization of these resources was found to be impossible without the participation of motor transport. At present, practically all goods for oil and gas prospectors and builders are delivered by motor transport, and then for only a few months during the year -- in the winter when the swamps are frozen. Use of ordinary motor vehicles at low temperatures and under onerous road conditions is especially difficult. The work of drivers is rigorous and inefficient. That is why the Soviet motor industry has been assigned the task of producing a "Northern version" of motor vehicles, i.e., a design adapted for operation under the conditions of the Far North, Siberia and the Far East. As early as the Ninth Five-Year Plan more than 5200 such vehicles were produced. Motor plants in the USSR are now series-producing "Northern version" trucks (ZIL-130S, Ural-375K, MAZ [Minsk Automobile Plant]-500S, KRAZ [Kremenchug Automobile Plant]-540, BELAZ [Belorussian Automobile Plant]-549S), buses (PAZ [Pavlovo Buss Plant im. A. A. Zhdanov]-320S, PAZ-672S, KAVZ [Kurgan Bus Plant]-685S, LIAZ [Likino Bus Plant]-677S) and ambulances (UAZ [Ural Automobile Plant]-452AS). Designwise, these motor vehicles are supplied with special devices for initial starting at low temperatures. The cabs of trucks and the lounges of buses have twin-pane windows and are heated. Vehicles are equipped with a vent-release mechanism, engine-compartment heaters and storage batteries. The reliability of the lighting system has been increased by using fog lights and searchlights controlled by the driver. During operation these vehicles use low-temperature fuels, oils, lubricants and technical fluids.

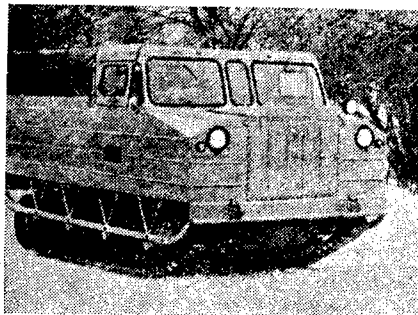


Figure 1

Sealing elements are made of cold-resistant rubber and other polymer materials.

But "Northern version" motor vehicles are not able alone to perform the intricate complex of transport functions in the northern and eastern regions. That is why the 25th CPSU Congress assigned motor-vehicle designers the job of expanding the types and producing specialized cross-country transport vehicles. The Soviet industry is now producing GAZ-71 and GTT light-duty tracked amphibious transport vehicles, but their design has to be changed in order to reduce the destructive effect of the caterpillar drive on the ground.

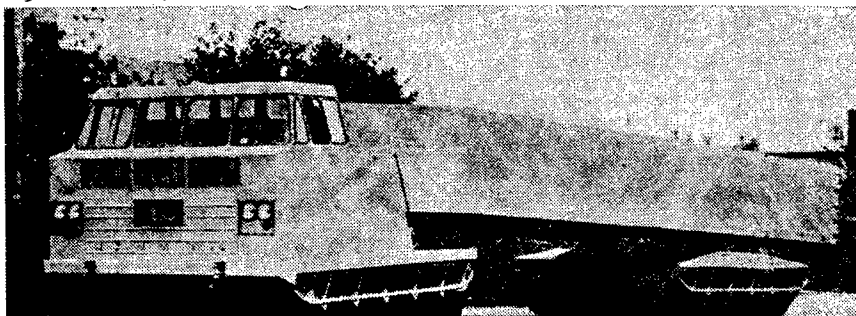


Figure 2

Studies that have been made show that one of the promising types of cross-country transport vehicles is the snow and swamp-going vehicle. This vehicle can operate under diverse roadless conditions as a means of transportation and as mobile drill, crane, fire engine and ambulance.



Figure 3

Due to the large bearing area of the caterpillar drive, the snow and swamp-going vehicle exerts low relative pressure on the ground of 0.02-0.035 MN/sq m (0.2-0.35 kg/sq cm) and can move over unbroken snow and swampy terrains. They negotiate water obstacles from 1.8-2 m deep. The rubber-block tracks are 2-3 times more resistant to wear and are considerably less destructive of the top soil layer. Typical specimens of this kind of unique means of transportation are the light-duty models devised by NAMI [Central Scientific Research Institute of Automobiles and Automobile Engines] -- up to 2 Mg (ton) (Figure 1) and up to 20 Mg (ton) (Figure 2).

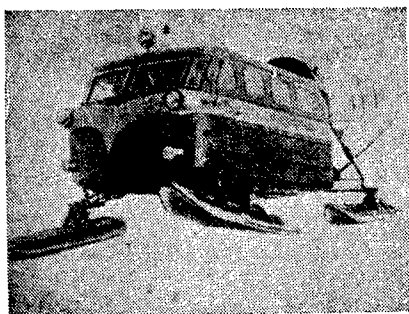


Figure 4



Figure 5

Designers of the Ural Motor Plant jointly with NAMI have created an 8-Mg (ton) snow and swamp-going vehicle (Figure 3). It is equipped with rubber-block tracks. Under a full load of 8 Mg (ton) this vehicle exerts pressure on the ground 10-20 times less than does a conventional motor vehicle. Tests that have been conducted have shown that it is capable of excellent operation without any kind of road. In addition, such a machine negotiates unbroken snow cover up to 1.5 m deep with no special difficulties.

Another type of promising means of transportation for the northern regions is the aerosleigh (Figure 4). Two-Mg (ton) aerosleighs are now being produced. These high-speed vehicles are intended for travel over snow cover, but can also be used as hydroplanes for travel over a water surface. Aerosleighs can be widely used as postal vehicles, ambulances and for the protection of the natural environment and public order.

In Rybinsk and Khabarovsk, 0.2-0.4 Mg (ton) motor sleds are produced. These compact vehicles are used for varying auxiliary transportation in many sectors and as means of transport for personal use. Their low relative pressure on the ski-track drive enables motor sleds to move over the snow surface at speeds up to 60 km/hr.

The Gor'kiy Polytechnic Institute has developed an experimental model ski-screw snow-going vehicle (Figure 5). It has significant advantages over tracked snow-going vehicles.

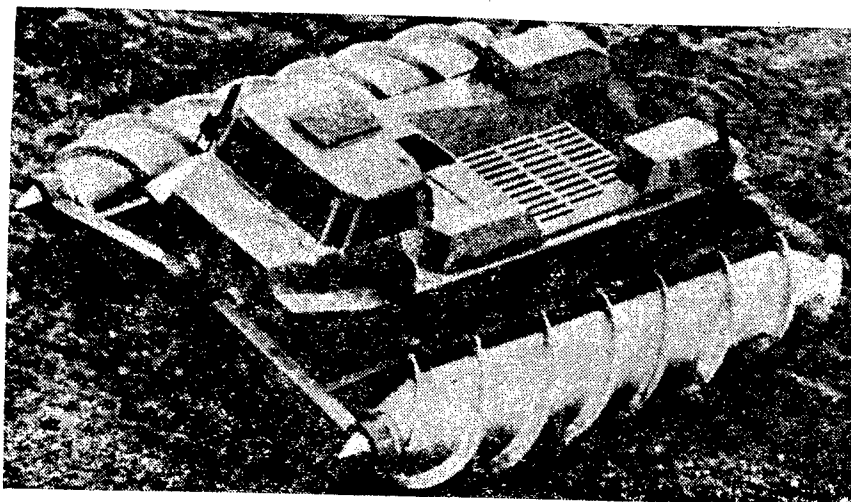


Figure 6

One of the design offices at Kaliningrad has developed a unique amphibious cross-country vehicle (Figure 6 -- in the position of travel over swampy terrain). A GAZ-66 (115-hp) automobile engine is used as the engine of the vehicle, while the transmission drives are from a series-produced truck. The design of the drive (running gear) is original. Wheels and screws (endless screws) are used here simultaneously. With this drive the vehicle equally well negotiates swampy terrain, water obstacles (afloat), snow cover and travels over the road (with screws raised -- Figure 7). Its capacity over dry land is 2 Mg (ton), and on water is up to 3.5 Mg (ton). On dry land it develops up to 40 km per hour, and on water up to 8 km per hour. The vehicle has a crew of one. Relative pressure on the ground when fully loaded is 0.008 MN/sq m (0.08 kg/sq cm). With one fuel fill-up the vehicle can operate for 8 hours. Comments of specialists about this vehicle are very good.

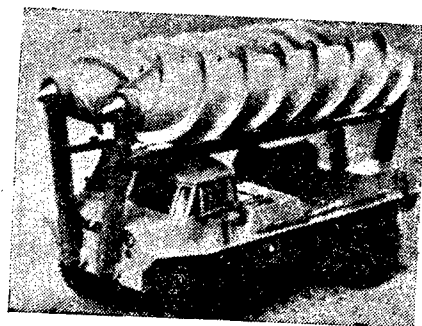


Figure 7

Soviet motor designers are now developing models of heavy-duty (up to 45-50 tons) and medium-duty (3-5 tons) snow and swamp-going vehicles. Also under development are air-cushion vehicles, which in the opinion of specialists are regarded as most promising for the delivery of equipment for the northern regions and for the carriage of heavy freight with mass up to 120 Mg (ton).

There is no doubt that the new cross-country vehicles together with the "Northern version" automobiles will substantially raise the efficiency of motor transportation, will lower transportation costs and help ease the labor of transportation workers under the conditions of the northern regions of the Soviet Union.

6474

CSO: 2202

PREPARATIONS FOR ARMED FORCES ANNIVERSARY DISCUSSED

Moscow KRASNAYA ZVEZDA in Russian 8 Dec 77 p 1 LD

[Editorial: "Greeting the Army and Navy Jubilee"]

[Text] The 60th anniversary of the USSR Armed Forces is approaching. The working people of our country, the army and navy servicemen, and our friends from the fraternal socialist countries are preparing to celebrate this notable date.

Preparation for the glorious jubilee is taking place under the tremendous influence and impression of outstanding events in our country's history--the adoption of the new constitution and the celebration of the 60th anniversary of Great October--and under the sign of the struggle to fulfill the decisions of the 25th CPSU Congress and the tasks set in Comrade L.I. Brezhnev's reports at the extraordinary Seventh Session of the USSR Supreme Soviet and the ceremonial session in honor of the 60th anniversary of Soviet power. The heroic path of struggle and victories traveled by the world's first socialist country and the imposing prospects of our further advance inspire Soviet people and the armed defenders of the motherland to new achievements for the triumph of communism.

The historic achievements of the land of the Soviets embody the selfless labor and mighty creative energy of our working class, kolkhoz peasantry and intelligentsia and the perspicacity and wisdom of the Leninist party of communists--the leading and guiding force of Soviet society. Our valiant armed forces, which for almost 60 years now have been reliably safeguarding the motherland's security and the Soviet people's creative labor, have made an important contribution to these achievements.

Stressing the need for the defense of the gains of socialism, V.I. Lenin pointed out: "Without relying on the blows already struck against imperialism, we must preserve our Red Army in all its combat readiness come what may and intensify its combat capability." Lenin's behests have become the militant program of the party and people in organizing the defense of the socialist fatherland and strengthening the armed forces of

the Soviet state. Today, turning our eyes toward the years of the establishment and development of our army and navy and surveying their heroic path we can say with complete justification: The Soviet armed forces created by V.I. Lenin and the communist party have honorably fulfilled and continue to fulfill their historic function and lofty mission.

So it was in the fiery years of the civil war, which ended with the defeat of the united forces of the internal counterrevolution and the foreign interventionists. So it was in the hard time of the Great Patriotic War, when our army and navy utterly defeated the war machine of Hitler's Germany. The heroic annals of the USSR armed forces are a graphic testimony to the unsurpassed courage and mass heroism of Soviet servicemen. And now they carry in their hearts and as their most precious possession selfless loyalty to the people and the cause of the party and are always ready to fulfill their patriotic and international duty.

The noble features and characteristics of our armed forces as an army of the new socialist type and the sources of their might, of which the main one is the leadership of the communist party, have been revealed in all their grandeur in hard battles and in military labor. "Our army," Comrade L.I. Brezhnev said at the 25th CPSU Congress, "has been educated in a spirit of deep devotion to the socialist motherland, the ideas of peace and internationalism, the ideas of the friendship of the peoples. This is precisely what distinguishes the Soviet army from the bourgeois armies. It is for precisely this that Soviet people love their army and take pride in it."

The Soviet armed forces have recently risen to a new level in their development, and their combat might has increased many times over. Thanks to the care of the party and people they are provided with first-class weapons and equipment. Beneficial changes have taken place in the army and navy personnel. Thus, for instance, the proportion of servicemen with higher and secondary education has increased from 12 to 80 percent compared with prewar times. The ideological-political tempering of the personnel has become stronger and their professional training has improved. The army and navy have wonderful military cadres devoted to the people and the cause of the party. The role of party organizations as the cementing force of the military collectives has been enhanced. All this enables our armed forces worthily to fulfill their constitutional duty to the people--to defend the socialist fatherland reliably and to be in a state of constant combat readiness guaranteeing the immediate repulse of any aggressor.

Preparation for the 60th anniversary of the Soviet army and navy opens up broad new opportunities for mobilizing the servicemen to the successful solution of the complex and crucial tasks set before them in further raising the troops' combat readiness. It is important now to direct the personnel's patriotic enthusiasm toward the high-quality fulfillment of plans for combat and political training in the new training year, the skilled mastery of modern weapons and new equipment, the raising of vigilance, organization and discipline and the unconditional observance of the demands of the military oath, regulations and norms of communist morality. To make the

year of the 60th anniversary of the USSR armed forces a year of shock military labor--that is the unanimous desire of Soviet servicemen, who support the example of the initiators of socialist competition in the army and navy, and it is a desire which must be embodied in specific deeds.

The educational and ideological work of the commanders political organs, party and Komsomol organizations and cultural and enlightenment institutions and our military press are called on to play a large part in the period of preparation for the jubilee. The task consists in revealing profoundly to the personnel the greatness of the heroic path of the USSR armed forces and the sources of their heroic victories and persistently developing in Soviet servicemen loyalty to the glorious combat traditions of our army and navy and the ardent desire to augment them by their excellent study and exemplary service.

Moving words resounded in the greetings from the Soviet armed forces at the ceremonial session in the Kremlin devoted to the 60th anniversary of Great October: "The feats of the heroes of the civil and Great Patriotic wars will remain an eternal, unfading example to us.... Loyalty to the party, devotion to the people, the readiness to give all our efforts and if necessary our lives for the motherland--these qualities are the same for us as they were for our fathers."

Preparation for the 60th anniversary of the Soviet armed forces and the celebration of this jubilee will be a vivid new demonstration of Soviet soldiers' loyalty to their sacred duty and their constant readiness for the selfless defense of the socialist fatherland and the gains of socialism and communism.

CSO: 1801

REVIEW OF THIRD VOLUME OF SOVIET MILITARY ENCYCLOPEDIA

Moscow KRASNAYA ZVEZDA in Russian 8 Dec 77 p 2 LD

[Review by Maj Gen N. Pankratov, professor, doctor of historical sciences: "Third Volume of the Soviet Military Encyclopedia"]

[Text] The third volume of the Soviet Military Encyclopedia has been published [footnote:] (Soviet Military Encyclopedia (in 8 volumes), chairman of the main editorial commission N.V. Ogarkov, third volume, Military Literature Publishing House 1977, 672 pages with illustrations, price 6 rubles 60 kopeks). It contains over 1,300 articles devoted to various questions of military matters.

Materials of a military theoretical nature occupy a special place in the volume and among these are articles devoted to the works of the classic Marxist-Leninist writers.

In particular it examines in detail V.I. Lenin's classic work "Imperialism as the Highest Stage of Capitalism"--a work which reveals the economic and political essence of imperialism as the last stage of capitalism. The article in the Soviet Military Encyclopedia emphasizes the topicality of Lenin's following proposition: Imperialism, as the main source of present-day wars, gives rise to the monstrous militarization of the economy and all spheres of social life. The production of weapons and military materials brings the monopolies fabulous profits. Therefore, the most developed industrial sectors and a considerable proportion of the scientific forces of the capitalist world work for war. Massive armies of cadres are earmarked for waging predatory imperialist wars and suppressing the struggle of the peoples of the enslaved countries and the working people of their own countries against the oppression of international capitalism.

The authors of the article draw the reader's attention to the fact that Lenin's teaching on imperialism serves as a very important theoretical basis for analyzing the process taking place in the present-day capitalist world and for working out the strategy and tactics of the international communist movement. creatively developing this teaching, the CPSU and the other Marxist-Leninist parties are profoundly exposing the essence of state-

monopoly capitalism, the features of the present historical era, whose main content is the transition from capitalism to socialism begun by Great October. The Leninist foreign policy of the USSR and the fraternal countries is defined and a developed program is formulated for struggling against imperialism and for peace, democracy, the peoples' freedom and independence and for socialism on the basis of a consideration of the correlation of world forces.

The attention of readers will also undoubtedly be attracted to articles in the Soviet Military Encyclopedia such as "The Sources of War" and "Imperialist War." They give a Marxist-Leninist analysis of the origin and essence of imperialist wars and stress that the aggressive nature of imperialism is the source of wars. All wars of this century have been caused by imperialism, by its predatory, expansionist policy aimed at enslaving and exploiting the peoples so that the monopolies can obtain maximum profits.

Since 1945 alone the imperialists have unleashed over 100 wars and military conflicts including those in Korea, Vietnam, and the Near East. The above-mentioned articles of the Soviet Military Encyclopedia draw our attention to the fact that imperialism has not abandoned its dangerous delusions that it can turn back the wheel of history. With every passing year the imperialist powers are increasing their military expenditures and increasingly building up the arms race. As long as imperialism exists, the dangers of wars and military conflicts remains.

But now, under the conditions of the fundamental change in the correlation of forces in the world arena in favor of socialism and the presence of the powerful socialist community and the enhanced role of the international communist and workers movement and the growth of the political activeness of all countries of the world, there are real opportunities for preventing wars and curbing the imperialist aggressors. The firm entrenchment of the principles of peaceful coexistence between states with different social systems in international affairs graphically testifies to this. In his report at the joint ceremonial session of the CPSU Central Committee, USSR Supreme Soviet and RSFSR Supreme Soviet entitled "Great October and the Progress of Mankind," Leonid Il'ich Brezhnev described this fact as "the result of the enormous amount of work done in recent years by the Soviet Union and the other countries of the socialist community with a view to achieving the restructuring of international relations in the direction of peace."

The third volume of the Soviet Military Encyclopedia also examines fundamental propositions of Marxism-Leninism on the defense of the fatherland. Marxism-Leninism recognizes the legitimacy and justice of wars in defense of the fatherland against foreign invaders and enslavers and for liberation from occupiers and their accomplices--the reactionary forces within a country. V.I. Lenin pointed to the need to approach the question of the defense of the fatherland in a specific historical manner, taking into account here the nature and main content of a particular era, and the nature of the socioeconomic and political system existing in the country.

It is well known that the imperialist bourgeoisie is widely resorting, for speculative purposes, to patriotic phraseology and appeals to defend "national interests" and "freedom and democracy." But as long as the proletariat is in the position of an oppressed and exploited class, it cannot have a real fatherland. This, of course, does not mean that under the conditions of an exploiting system the working class and working masses are indifferent to the fate of their country. But in a society of class antagonism the slogan of the defense of the fatherland is just and legitimate only under the conditions of the struggle of the peoples of oppressed countries against the imperialist neocolonialists and also the struggle of independent bourgeois states against the economic and political expansion and aggression of the imperialist powers.

The article "The Defense of the Socialist Fatherland" in the volume of the Soviet Military Encyclopedia under review gives a strictly scientific substantiation of the need for the armed defense of the socialist state against imperialist aggression and reveals the conditions and ways of insuring the reliable defense of socialism. Even now permanent significance is attached to V.I. Lenin's words to the effect that "Any revolution is only worth something if it knows how to defend itself...."

V.I. Lenin determined the most important features of the country's economic, moral, political, scientific and technical preparation for the defense of the gains of socialism and the ways of constructing a military organization of the new, socialist type. The central place in Lenin's teaching on the defense of the socialist fatherland is occupied by the thesis on the participation of the entire working people in strengthening the country's defense and the constant readiness of the worker peasant state to repulse an armed attack by socialism's class enemies. A decisive role in the defense of the socialist fatherland belongs to the leadership of the communist party. V.I. Lenin made the extremely important conclusion that not one bourgeois state has such sources of strength, steadfastness and endurance of the popular masses, which in the final analysis determine the course and outcome of the war, as those possessed by the socialist state.

In contemporary conditions defense of the socialist fatherland remains as before one of the Soviet state's most important functions and the primary task of the communist party and the entire Soviet people. This thesis is enshrined in the CPSU program, the decisions of the 25th Party Congress and the new USSR Constitution.

In the volume under review a number of articles are devoted to revealing the most important decisions of the communist party and Soviet government on military questions. The content of Soviet military doctrine is also revealed. In it are concentrated the CPSU's scientifically founded views on the defense of the socialist fatherland, and the principles of the Soviet state's peace-loving foreign policy and firm readiness to repulse any aggressor are fused together.

The large number of articles in the third volume of the Soviet Military Encyclopedia sheds light on the history of wars and the development of

martial arts. Considerable space in this group is given to the article "The Civil War and the Military Intervention in Russia 1918-20." The article familiarizes the readers with the struggle of the communist party and Soviet government to establish Soviet power in the country and to withdraw Soviet Russia from World War I, and reveals our party's measures directed toward suppressing the international counterrevolution and repulsing the invasion of the allied forces of imperialism. The authors of the article show the development of the military intervention and civil war as a result of which Soviet Russia found itself surrounded by fronts. Concrete facts reveal the predatory schemes of the imperialists of the entente, the United States and Japan, and show their role in uniting the forces of internal and international counterrevolution with the aim of restoring capitalism in Russia.

The Soviet republic's decisive victories over the Allied forces of external and internal reaction are examined in detail and the communist party's concrete measures in routing the troops of Kolchak, Denikin, Yudenich, Poland of the landed bourgeoisie and Vrangeli and also in eradicating the last vestiges of counterrevolution and intervention in November 1920-October 1922 are analyzed. The article reveals the sources and the historic worldwide significance of our victory. Particular emphasis is given to the decisive importance of the leading, directing activity of the communist party and its Central Committee led by the brilliant strategist of the revolutionary struggle, V.I. Lenin, in elaborating an effective military policy and in organizing the Soviet people's victories on the fronts of the civil war.

A considerable number of the documents in the third volume of the Soviet Military Encyclopedia shed light on the heroic struggle of the Soviet people and their armed forces against Fascist Germany and imperialist Japan in 1941-1945. In the work under review the reader will find articles devoted to the individual fronts (Don, Western, Transcaucasian and Transbaykal) and individual operations of the Great Patriotic War period. They give a detailed account of the situation, the German Fascist command's plans, the Soviet general's schemes, the measures taken by the Soviet Supreme High Command toward routing the enemy's main strategic groupings, and the details of combat operations.

Among the articles of the third volume familiarizing the reader with several events of foreign military history, noteworthy is the material on the 1898 Spanish-American War which, according to V.I. Lenin's definition, was one of the main historic milestones of the beginning of the epoch of imperialism. This war over the redistribution of colonial possessions unleashed by the American imperialists with the aim of seizing Spanish colonies in the Caribbean (Cuba, Puerto Rico) and in the Pacific (Philippines) clearly revealed the United States' claims to world domination.

The volume includes extensive material describing the history, geography, economy and armed forces of many world states, including Greece, Denmark,

Egypt, Israel, Iraq, Italy and others. A vast number of subjects is presented in articles on continents, water basins and military bases.

On the whole the authors and editorial collectives of the Soviet Military Encyclopedia volume under review succeeded in giving a well-reasoned illumination of a considerable number of military questions. There is no doubt that the publication of the third volume of the Soviet Military Encyclopedia will arouse great interest in a broad circle of readers, primarily military, and will promote the further broadening of Soviet military personnel's horizon and will serve the cause of educating Soviet servicemen in the spirit of the communist party's modern requirements.

CSO: 1801

ARMY PAPER LAUDS DEVELOPMENT OF SOCIALIST COMMUNITY

Moscow KRASNAYA ZVEZDA in Russian 11 Dec 77 p 1 LD

[Editorial: "Indestructible Unity"]

[Text] The Great October Socialist Revolution laid the foundation to a new historical era--the era of transition to socialism and communism. The living reality of our time confirms indisputably that the great community of socialist type, has become the leading force of the irrepressible process of the world's revolutionary renewal begun 60 years ago. This community is a community of states led by the communist and workers parties, rallied by their common Marxist-Leninist world outlook and the ideas of internationalism and by their relations of fraternal cooperation and solidarity and the community of the great aim of building socialism and communism.

The fraternal communist and workers parties regard the further unswerving and consistent consolidation of the unity and cohesion of the family of socialist countries and the development of all-round cooperation between the socialist states in the most diverse spheres as one of their most important tasks. The principled course of the CPSU and Soviet state in this field was reaffirmed at the 25th CPSU Congress and is enshrined by legislation in the recently adopted new Soviet Constitution. The Soviet Union, the USSR fundamental law states, "as a component of the world system of socialism and the socialist community, develops and strengthens friendship and cooperation and comradesly mutual aid with the socialist countries on the basis of the principle of socialist internationalism and takes an active part in economic integration and the international socialist division of labor."

The cohesion and indestructable unity of the peoples of the socialist community were manifested particularly graphically during the preparation and celebration of the 60th anniversary of the Great October Socialist Revolution. The October jubilee was celebrated as a very big holiday in all the fraternal countries. During those unforgettable days the world was convinced anew that the peoples of the socialist countries are inspired by the same ideals. They graphically demonstrated the mighty power of friendship and solidarity and the effectiveness of the principles of socialist internationalism. "We can say with a clear conscience that our alliance,

our friendship and our cooperation," Comrade L.I. Brezhnev noted in his report at the ceremonial session in the Kremlin, "are an alliance, friendship and cooperation of sovereign, equal states rallied by common aims and interests and the ties of comradely solidarity and mutual aid."

As V.I. Lenin predicted, socialism is exerting its main revolutionizing influence on the course of historical development by its economic successes. Life is providing ever new confirmation of this. Our ideological opponents can no longer dispute an irrefutable truth: The socialist countries are now a mighty economic force displaying the most dynamic industrial growth in the world. Suffice it to say that in the past 5-year period alone the industry of the states of the socialist community developed a little over five times more rapidly than the industry of the common market countries. In 1977 the national income of the CEMA countries had increased approximately tenfold compared with 1948 while in the developed capitalist states it has increased only 3.4 times.

The unity and cohesiveness, solidarity and mutual support of the fraternal countries have won them tremendous authority in the international arena. The mechanism of their foreign policy collaboration has formed and is operating successfully. This means above all the political consultative committee of the Warsaw Pact states. The Soviet Union and the other socialist countries have come out with important initiatives and advanced specific proposals on questions of insuring universal peace and security and eliminating the threat of a new world war, considering this to be their main foreign policy task. Thanks to the coordination of the efforts of the socialist countries and their coordinated and consistent policy, considerable successes have been achieved in the struggle to strengthen security.

While wholly approving the course of the CPSU toward consolidating the positions of world socialism and the socialist community, the Soviet people do not forget for a minute that the struggle to strengthen international security and insure favorable foreign policy conditions for building developed socialism and communism, which is being waged tirelessly by the Soviet Union and the fraternal countries, is taking place in a complex situation. Western imperialist circles and above all NATO, with which the Peking leadership is now virtually merging, are steering a course toward undermining detente. An unprecedented arms race is continuing and ever new types of death-dealing weapons are being created in the United States and other NATO countries.

All this obliges the Soviet Union and its Warsaw Pact allies to strengthen their unity and cohesiveness constantly, to keep track of the intrigues of aggressive forces, and to raise to a new higher level the fraternal cooperation and collaboration of the socialist countries on all salients, including the strengthening of their defense capability. The combat community of the armies of the Warsaw Pact states is becoming increasingly firm. The results of the session of the Committee of Defense Ministers of the Warsaw Pact states held in Budapest will serve as a new step on the path of the consolidation of the brotherhood in arms between the armies of the countries of the socialist community. The session took coordinated decisions connected with the current activity of the joint armed forces.

Soviet servicemen see their duty in tirelessly raising their combat readiness and, together with their brothers in arms--the servicemen of the armies of the Warsaw Pact countries--in being ready to deal a fitting rebuff to any intrigues by aggressive forces.

The world has entered the seventh October decade. "We are marching," Comrade L.I. Brezhnev said in his report at the ceremonial session in the Kremlin, "to greet an era when socialism in one or another historically conditioned form will become the dominant social system in the world, bringing with it peace, freedom, equality and prosperity to all working mankind."

The historic achievements of the countries of the socialist community, their indestructible unity and their cohesiveness in the struggle for the triumph of communist ideals inspire the working people of the whole world and serve as a guiding beacon for millions of people of our planet.

CSO: 1801

MILITARY DISTRICT NEWSPAPERS CRITICIZED ON SUBJECT OF VIGILANCE

Moscow KRASNAYA ZVEZDA in Russian 13 Dec 77 p 2 LD

[Unattributed press review: "Vigilance Is Our Weapon"]

[Excerpt] All that has been said certainly does not mean that the newspapers NA BOYEVOM POSTU [of the Moscow PVO District] and SUVOROVSKIY NATISK [of the Far Eastern Military District] do not have shortcomings in illumining such an important subject as the education of soldiers in the spirit of high vigilance and constant combat readiness. These newspapers, particularly SUVOROVSKIY NATISK, still publish few detailed articles of profound content generalizing the progressive experience of party political work in fostering high vigilance in soldiers.

The newspaper ZA RODINU of the Red Banner Baltic Military District does not cover the subject of vigilance fully enough. Occasionally, it is true, the newspaper publishes articles on how personnel in units and subunits perform their duty, guard service and daily detail. But these articles only just touch on the subject of vigilance. Yet the subject demands profound elaboration, concreteness and disclosure of experience.

An analysis of this newspaper's publications on questions of fostering vigilance shows that these articles are produced in a stereotyped manner and are inexpressive. Let us compare the reports "For High Vigilance" and "Be on the Alert." The first discusses the work of the Komsomol bureau in propagandizing the requirements of the oath and military regulations, while the second, by the personnel of a subunit is about the fulfillment of Lenin's behest to be on the alert. Different subjects, you might think, which need to be elaborated differently. But the authors, and the editors along with them, took the easy, primitive path--they enumerated the measures taken but said hardly anything about how work is being carried out on educating soldiers in the spirit of loyalty to their duty, what difficulties the educators encounter and how these difficulties are surmounted.

Certain editorial collectives do not always struggle for the effectiveness of their articles. Here is just one example. On 23 September the newspaper

NA STRAZHE of the Red Banner Baku PVO District carried the report "Incident While Training." It described how a training target was missed as the result of an operator's carelessness and negligent attitude toward the fulfillment of his official duties. You expect the newspaper to tell the reader a little later what conclusions the military collective drew from what had happened and what the commander and the subunit's party and Komsomol organizations undertook to raise vigilance. But the newspaper's readers did not learn of the results of this critical article.

And now about another very important aspect. The subject of soldiers' education in the spirit of high vigilance can be illumined in full only when a newspaper organically links it with the subject of exposing the aggressive essence of imperialism. Both ideological saboteurs from the camp of the enemies of peace and detente and intelligence organs in the service of imperialism have recently grown considerably more active. However, certain district, group and fleet newspapers still provide few articles revealing the savage makeup of imperialism, exposing the intrigues of the opponents of the relaxation of international tension and dealing a decisive rebuff to ideological sabotage. But it is the duty of the army and navy press to do this.

A high sense of responsibility for the security of the socialist motherland and for the defense of its sacred borders and state interests is an inalienable quality of Soviet soldiers. They are characterized by high vigilance and constant combat readiness. The military press is called upon extensively to show how these qualities are molded in soldiers in daily service, combat training and life.

CSO: 1801

MILITARY PROSECUTORS DISCUSS LEGAL EDUCATION

Moscow KRSNAYA ZVEZDA in Russian 14 Dec 77 p 3 LD

[Report by Colonel of Justice G. Kryazhev: "Conference of Military Prosecutors"]

[Text] A conference of military district, fleet and group of forces prosecutors has been held. In his report Colonel General of Justice A. Gornyy analyzed the state of work of military prosecutor's offices and set tasks for the further improvement of higher supervision of the observance of laws in the armed forces in the light of the decisions of the CPSU Central Committee May and October (1977) plenums, the materials of the extraordinary seventh session of the USSR Supreme Soviet, the new USSR Constitution and the provisions and conclusions contained in the reports and speeches by Comrade L.I. Brezhnev, general secretary of the CPSU Central Committee and chairman of the USSR Supreme Soviet Presidium.

Major Generals of Justice P. Karamushka, A. Shoyev, N. Kovyazin, V. Ivakhnyuk and B. Tsallagov, Colonel of Justice V. Krotenkov and others participated in the discussion of the report.

The conference participants were addressed by army Gen S. Sokolov, USSR first deputy minister of defense, who drew the military prosecutors' attention to the need to step up supervision of the fulfillment in the forces of the demands of general military regulations and to the enhancement of the role of military jurists in the legal education of officers and in the fulfillment of the tasks set by the USSR Ministry of Defense for the new academic year.

In his speech Col Gen M. Sobolev, deputy chief of the Soviet army and navy main political directorate, talked about the significance of the legal education of troops in the comprehensive solution of ideological tasks and stressed the role of military prosecutor's office party organizations in insuring the successful activity of these organs.

It was noted at the conference that the improvement of the quality of investigatory and judicial work, activeness, principledness and persistence in the implementation of supervision of the observance of laws in the activity

of organs of military control, in-depth propaganda of the new USSR Constitution and the unswerving implementation of its provisions are an important condition for the further strengthening of socialist legality, law and order and discipline in the forces.

The conference was attended by executive workers of the CPSU Central Committee, the USSR Prosecutor's Office, the USSR Supreme Court, the USSR Ministry of Justice, the USSR People's Control Committee, the USSR Council of Ministers Committee of State Security and Jurists.

CSO: 1801

END